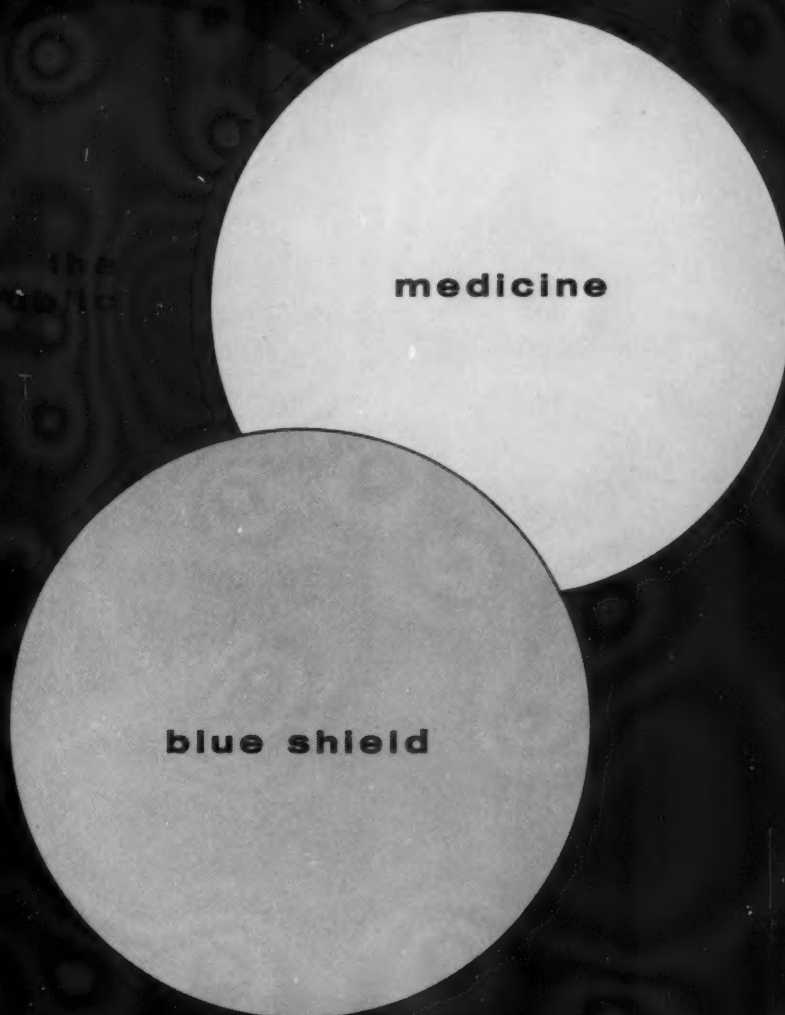


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(1) Carter, S.: M. Clin. North America 37:315, 1953.
(2) Maltby, G. L.: J. Maine M. A. 48:257, 1957.
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THE COVER

The cover design graphically illustrates the relationship between medicine, the general public and Michigan Medical Service as this number helps to tell the Blue Shield story.

June, 1961

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President's Page

ON THE SPOT!



Kenneth H. Huson

President
Michigan State Medical Society

I write this page with sincerely mingled feelings. In the first place, I still practice medicine which is my first love. In the second place, by the time this is printed, the new headquarters building in East Lansing will have been dedicated. Dedicated to service for the citizens of Michigan from the Michigan State Medical Society. Third—I have just returned from Washington, D. C., where I, along with six others from MSMS, and Sumner Whittier of Blue Shield, tried to appraise the political situation on the national level.

I have never had an answer from any President's Page to date. My so-called "angry" letter at least got some reaction—both for and against. I, therefore, wonder whether this message will reach the doctors of Michigan. I can only hope it will.

Let me go back now and pick up my mingled feelings. Regardless of who he is or what he does as a practicing physician, once one assumes the responsibilities of political medicine, he will have to pay for it in time, energy and money, whether it be a success or failure. He can not be misled by thinking he can do both well. He must sacrifice one or the other. Therefore, it is most important that nothing be sacrificed for personal vanity. Physicians who carry the ball—politically—do so at great personal sacrifice.

The new headquarters for MSMS is one of the most beautiful buildings you will ever see. Most importantly, it is a very real challenge to every physician in Michigan to realize that he has a destiny with the present and the future. Not only will this building be used by the individual components of the MSMS, but it will be a rallying point for many organizations which have important contributions to make to the health and welfare of the people of this state.

Now, I want to say something to you, as physicians—as a result of my recent experience.

The situation in Washington is in the nature of a political deal—no more, no less. There is no intellectual evaluation being used to decide the issues. One of our most helpful interviews was from a Democrat who flatly stated that he agreed with us, but would have to vote for the administration bill because he had no other choice. There is no chance to argue against this situation; it is his political life or oblivion.

The physicians of this country, whether we are represented by the AMA, the MSMS or any county medical society are on a spot. We have no other choice but to stick together. It matters little as to whether you are a surgeon, an internist, an obstetrician, a pediatrician, a plastic surgeon, an orthopedist, an anesthesiologist, a urologist, a psychiatrist, or a general practitioner—we are either together or we are nothing! In addition, whatever our individual feelings are concerning Blue Shield, we have no other choice but to make it work. It is our best answer to the democrats, the socio-economist, the unionist, the politician who would try to usurp our prerogatives as physicians. I would say as I view the picture after my recent trip—everyone of you should go to Washington in order to personally see what I mean. But if you cannot; take my word for it, there is no other choice before us but to put all our energy into keeping Blue Shield solvent and workable.

Thousand Attend MSMS Dedication

The new headquarters building of the Michigan State Medical Society was dedicated June 4 at East Lansing with approximately 1,000 doctors and friends participating in the program and open house.

It was an impressive affair—with many challenges presented to the Michigan doctors of medicine to improve and expand their services to the public. And there were assurances by medical spokesmen that these opportunities are being met now and will be tackled with new vigor in the future from the headquarters building.

* * *

THE DEDICATION WEEK-END activities began June 3 with the meeting of The MSMS Council. Ceremonies on June 4 began with the flag-raising ceremony at 2:45 p.m., followed by the dedication program at 3 p.m. from a platform at the rear of the building.

Selected officials of MSMS and several past presidents participated in the flag-raising ceremony. A color guard of the Michigan National Guard hoisted the flag, presented by Congressman Charles Chamberlain. The flag formerly flew over the Capitol in Washington, D. C.

The dedication ceremony was called to order by William S. Jones, M.D., of Menominee, a past MSMS president and chairman of the Big Look Committee. He presented President Johnson, who in turn introduced the dignitaries at the speakers' platform. Dr. Johnson presented a short address, "The Past is Prologue" and E. Vincent Askey, M.D., of California, AMA president, gave a speech, entitled "The House that Medicine Builds."

* * *

FOLLOWING THE PROGRAM, the spectators were invited to tour the building.

Members of the MSMS House of Delegates were honored guests for the day, and their names were listed in the dedication program booklet. Members of The Council served as guides during the open house.

Members of the Woman's Auxiliary to MSMS were hosts in the Conference-Dining Room, where they maintained a guest-registry book.

AMA President Askey Says Headquarters a Place For Answers, Decisions

Following are some excerpts from the dedicatory address given by E. Vincent Askey, M.D., AMA president, at the June 4 dedication of the new MSMS headquarters building:

"To me Michigan medicine and Michigan physicians have erected a headquarters that signifies service to the public and to the profes-



sion and untold contributions to society. The architecture expresses to me that the men and women of medicine who have been a part of this building campaign are leaders and doers with vitality, devotion and resolution.

"I see this grand building as a place for solving problems, for disseminating public and professional education and information, for reliable decisions in the best interests of the public and medicine, and for promoting the best in the art and science of medicine and the betterment of the public health.

"Here is a structure that expresses the confidence, knowledge and foresight of the medical profession. Here is a headquarters that beckons to all in clear ringing voice: 'Bring me your problems, your woes and your dilemmas, and they will be resolved within these walls by the dedicated men and women housed herein.'

"Yes, this is a headquarters building which will be a house of solutions, answers and decisions, not a house of secrets, doubts and indecisions.

Facts and Truths Assured

"From here will go out medical truths and facts, not distortions and fraud. Here will be found the keys to better public understanding of the medical profession. From here will go the latest medical information to physicians and to the public. And here both the profession and the public will get further medical and health education.

"This is the house that Michigan medicine has built—a place where problems are resolved not created; a place where difficult issues are explained not twisted; a place where reliable help and assistance is offered to profession and public alike.

"This new headquarters of the Michigan State Medical Society built on the solid foundation of concrete, stone and steel has an even more substantial foundation. And that base of rock is the personal service, devotion and medical care provided by every Michigan physician to every patient that he sees.

Doctor-Patient Role Important

"The 'heart' of that foundation has been, and still is, the devotion of physicians to patients, the competence to handle the problems of the individual patient, and the completely ethical manner in which each physician carries out his role in the doctor-patient relationship.

"These are the elements of good medical practice. And these, plus the medical society's unceasing efforts to guarantee medical care for all regardless of their ability to pay and its deep concern with the problems of the financially needy, the aged, community health and safety, disease detection, doctor placement and supply, emergencies, medical facilities, quacks and fads, school health, rural health, occupational health,

and a hundred other items, have resulted in a great and growing public confidence and trust in the physician and the medical society.

"As President of the American Medical Association, I am delighted to know that the Michigan State Medical Society has a unique five-year Presidents Program aimed at increasing the potential productivity and usefulness of additional years of life. And I am happy to know that in this new headquarters the first major project will be the implementation of this wonderful program.

"Projects of this kind are the blocks of granite by which a respected, resourceful and resolute medical society builds a better and more healthful life for the people physicians serve.

MSMS on Health Team

"Let no man or woman here today, whether it is in medicine, business, labor, government or any other pursuit, think for one minute that a medical society functions for physicians only, or for the profession only. This society and this headquarters, just like every other state and county medical society and the American Medical Association, are integral parts of the health team of this state and of our nation.

"Their roles are vital to the individual's health, the community's health and the nation's health."

MSMS President Sees Greater Efficiency

Following are excerpts from the June 4 address of MSMS President Johnson:

"The Michigan State Medical Society is in its 96th year. We who are the representatives of our profession within the framework of this Society are proud of the past 95 years. Its members have been credited with many individual achievements and collectively have been responsible for many firsts among the State Societies of the country. In addition, the Society has conscientiously striven to accept and adapt to its own situation ideas from many other groups.

"We believe that this has been done with integrity, soberly applied aggressiveness, and somewhat more than ordinary success. The total effect of these efforts, which I shall not spend time enumerating, have provided the citizens of this State with improved health and general welfare.

"Our efforts here have been not only in the field of medical science but also in areas of social improvement and economics. The Michigan State Medical Society has been the 'family doctor of the people of Michigan,' always willing to refer to specialists in their field when the need has arisen, but collectively aware of the requirements of all for these many years.

"In addition to the vast number of activities now

operational and which will be more adequately fulfilled here, there are programs and plans not yet completely activated which will be put into operation as soon as possible.

Presidents Program Unlimited

"The most significant immediate idea which will be put into operation, and in fact is already operating, in connection with this headquarters building is the Presidents Program of the Michigan State Medical Society.

"It is unlimited in its scope. I have been much impressed by the enthusiastic response this idea has elicited. In this day when our news is so full of tragedy or threats of tragedy, we need ideas like this to make us work for better things. We believe this is such a plan—and we are proud to speak of it at this particular occasion, since our headquarters building will be the control center of the program.

"While the Presidents Program will be a number one project during the next five years, we are no less intent in our purpose to continue to improve our work in all areas.

To Seek Greater Cohesion

"Since the State Society exists only because of and is controlled by the component county medical societies, our new headquarters will provide an opportunity to identify this relationship more closely. Undoubtedly, there will also ensue a better contact between county medical societies, thus making for greater cohesion.

"We sincerely believe its facilities will provide for greater efficiency by the staff and increasing satisfactory performance by the various functioning elements of the State Society, to the end that all of us shall be healthier and happier.

Photos Later

Photographs taken at the June 4 MSMS dedication will appear in the July issue of *THE JOURNAL*. The June issue was held up several days in order to include this timely report of the dedication.

Congratulations!

Dear Doctor Johnson,

Sincerely regret my schedule will not permit my presence this afternoon at the dedication ceremonies of the Michigan State Medical Society's new headquarters. Personal good wishes to all attending this fine affair for a most memorable afternoon.

JOHN B. SWAINSON, Governor

* * *

Dear Doctor Johnson,

Much to my regret, I shall not be able to accept your kind invitation to join you at the dedication of your new headquarters building on Sunday, June 4.

The spectacular advances made in medicine reflect dramatically the devotion of dedicated men and women in the profession. I am delighted that you will have this new building, and add my congratulations to the many I know you are receiving.

PHILIP A. HART, Senator

* * *

Dear Doctor Johnson,

I wish very much that I could join you and your guests tomorrow for the dedication of the new Michigan State Medical Society headquarters, but it is not possible for me to be in Michigan this weekend. I know you are proud of your new building and its symbol of progress within your Society, and I look forward to visiting the headquarters soon. Please extend my best wishes and warm congratulations to the members of the Society.

CHARLES E. CHAMBERLAIN, Member of Congress

* * *

Dear Doctor Johnson,

The Chamber of Commerce of the United States congratulates you and the Michigan State Medical Society upon the dedication of your new headquarters building. We wish you the greatest successes in your service to the people of Michigan and the improvement of medical care for all people. It is a privilege to be associated with you in this important work of building a prosperous and free nation.

RICHARD WAGNER, President

United States Chamber of Commerce

MICHIGAN MEDICAL MEETINGS AND CLINIC DAYS

July 27-28	Coller-Penberthy Clinic	Park Place Hotel, Traverse City
Sept. 27-28	Michigan State Medical Assistants Society	Pantlind Hotel, Grand Rapids
Sept. 27-28	Woman's Auxiliary to MSMS	Occidental Hotel, Muskegon
Sept. 27-29	MSMS Annual Session	Pantlind Hotel-Civic Auditorium, Grand Rapids
Sept. 29-30	"Doctors' Day"	University of Michigan, Ann Arbor

MSMS Studies McNerney Reports

The reports being issued by the Michigan Study of Hospital and Medical Economics, a University of Michigan project for the Governor's Commission on Prepaid Hospital Plans, are being studied by The MSMS Council and several MSMS committees.

The first three of the thirteen different studies were released May 14, and the balance will be explained by Professor Walter J. McNerney, project director, at news conferences in June. A preliminary session with 65 representatives of MSMS, MMS, MHS and the Michigan Hospital Associations was held April 27.

Circuit Judge George E. Bowles, chairman of the Governor's Commission, reports that the Commission will study the recommendations and detailed information during the summer and make its recommendations to the Governor in the fall.

Chairman Bowles has declared, "We are constituted to help, not to condemn, and through our broad charge hope to make recommendations and to win the enlightened cooperation of interested groups."

The study has been financed by grants of \$380,000 from the Kellogg Foundation. The study reportedly is the largest independent analysis yet made of hospital and medical economics in the nation. The work began three years ago. The completed report will be published (1,600 pages) under the title, "Hospital and Medical Economics," by the Hospital Research and Educational Trust, Chicago.

Blue Cross-Blue Shield Announcement

During the next three months, enrolled members of your Professional Association (in Groups No. Series 94,000) will receive printed material from Blue Cross-Blue Shield, which will give subscribers an opportunity to: 1. Change coverage to a Deductible Program; 2. Make other changes in Blue Cross-Blue Shield coverage.

MEMBERS OF YOUR ASSOCIATION NOT NOW ENROLLED FOR GROUP COVERAGE may obtain an application and a folder, describing the coverage available to them, by calling or writing the nearest Blue Cross-Blue Shield District Office or by writing the Special Accounts Department, Blue Cross-Blue Shield Building, 441 East Jefferson Avenue, Detroit 26, Michigan

Dr. Payne Honored

C. Allen Payne, M.D., Grand Rapids, MSMS Councilor, was honored recently by the American Cancer Society at a Grand Rapids meeting when he was presented a National Divisional Award for Distinguished Service. Doctor Payne is a member of the Michigan Division Executive Committee and the Board of Directors and also represents the division as a professional delegate. He also represents his division on the Michigan Cancer Coordinating Committee.

Report on Visit to Congress

The following report was made to The Council by those constituting the Michigan delegation who visited Congress April 30-May 3, 1961:

We are utterly convinced that

1. Action to solidify opposition against some form of socialized medicine is needed *immediately*;
2. The problem is clearly national in scope—every single congressman is a key man;
3. Michigan representation in Washington, at this time, is justified to hold every possible vote for medicine;
4. Local action through 10-10-10, regional meetings, et cetera, must be correlated with point 3 above and go forward with dispatch; and
5. Every physician must support the Blue Plans as a major defense against socialized medicine.

We are of the unanimous opinion that our visit with the Michigan congressmen in Washington, D. C., was of great mutual value, and unreservedly recommend that the congressional visitations be continued on an annual basis. For our part, the experience brought many major aspects of the current situation into focus and gave us valuable insights as to the complex problems and attitudes of our congressmen; on the other hand, *all* of our congressmen made it very clear that they appreciated our interest in them as evidenced by the visit.

K. H. JOHNSON, M.D.
L. A. DROLETT, M.D.
C. ALLEN PAYNE, M.D.
R. J. MASON, M.D.
J. R. DEHLIN, M.D.
H. W. BRENNEMAN
M. A. RILEY

How would you design a tranquilizer specifically for geriatric patients?



wouldn't you see how closely these ATARAX
want it to be: advantages meet your standards

efficacious

ATARAX "... seems to be the agent of choice in patients suffering from removal disorientation, confusion, conversion hysteria and other psychoneurotic conditions occurring in old age."¹

remarkably
well tolerated

"No untoward effects on liver, blood, and nervous system were observed."²

palatable

Delicious ATARAX syrup pleases patients who resist tablets.

Nor is that all ATARAX has to offer. When elderly patients require surgery, ATARAX provides effective preanesthetic adjunctive therapy. In fact, though outstandingly useful in geriatric patients,^{1,2} ATARAX equally well meets the needs of disturbed children and tense working adults (it calms, seldom impairing mental acuity). Why not extend its benefits to *all* your tense and anxious patients?

Dosage: For adults: 25 mg. t.i.d. to 100 mg. q.i.d. For children: under 6 years, 50 mg. daily; over 6 years, 50-100 mg. daily; in divided doses. **Supplied:** Tablets 10 mg. and 25 mg., in bottles of 100 and 500. Tablets 100 mg., in bottles of 100. Syrup 2 mg./cc., in pint bottles. Also available: Parenteral Solution. Prescription only.

References: 1. Smigel, J. O., et al.: *J. Am. Geriatrics Soc.* 7:61 (Jan.) 1959.
2. Shalowitz, M.: *Geriatrics* 11:312 (July) 1956.

ATARAX

(brand of hydroxyzine HCl) PASSPORT TO TRANQUILITY



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Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

VITERBA® Capsules—Tastitabs®—Therapeutic Capsules for vitamin-mineral supplementation



unsurpassed "general-purpose" steroid outstanding for "special-purpose" therapy

Aristocort[®]

in allergic and inflammatory dermatoses

Aristocort[®]

Triamcinolone LEDERLE

UNSURPASSED "GENERAL-PURPOSE" STEROID OUTSTANDING FOR "SPECIAL-PURPOSE" THERAPY

ARISTOCORT Triamcinolone has long since proved its *unsurpassed efficacy and relative safety* in inflammatory and allergic dermatoses.

But ARISTOCORT has also opened up new areas of therapy for selected patients who could otherwise not be given corticosteroids.

for example:

SPECIAL PROBLEM: EDEMA DUE TO SODIUM AND WATER RETENTION

In patients with edema induced by the earlier corticosteroids or from other causes, diuresis and sodium loss often occurs with triamcinolone. (Fernandez-Herlihy, L.: *M. Clin. North America* 44:509 [Mar.] 1960.)

SPECIAL PROBLEM: APPETITE STIMULATION AND WEIGHT GAIN

In contrast to the heightened craving for food sometimes seen with other corticosteroid compounds, appetite was unaffected by triamcinolone. (Cahn, M. M., and Levy, E. J.: *Am. Pract. & Digest Treat.* 10:993 [June] 1959.)

SPECIAL PROBLEM: HYPERTENSION

When ARISTOCORT was given to patients with dermatologic disorders for long periods, there were no significant changes in blood pressure. (Kanof, N. B.; Blau, S.; Fleischmajer, R., and Meister, B.: *A.M.A. Arch. Dermat.* 79:631 [June] 1959.)

SPECIAL PROBLEM: PSYCHIC STIMULATION AND INSOMNIA

Ideally, corticosteroid therapy ought not to add to the psychic component in dermatologic disorders, nor induce insomnia which will intensify the patient's itching and irritation. ARISTOCORT Triamcinolone has been singled out for its remarkably low incidence of psychic irritation and insomnia. (McGavack, T. H.: *Nebraska M. J.* 44:377 [Aug.] 1959; Freyberg, R. H.; Berntsen, C. A., Jr., and Hellman, L.: *Arthritis & Rheumatism* 1:215 [June] 1958.)

SPECIAL PROBLEM: SEVERE CARDIAC DISEASE

Elderly patients with pulmonary emphysema due to impending heart failure who required corticosteroid therapy showed that triamcinolone could be employed with benefit and relative safety. (McGavack, T. H.; Kao, K. Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 [Dec.] 1958.)

Precautions: Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. In the treatment of allergic and inflammatory dermatoses, dosage should be individualized and kept at the lowest level needed to control symptoms. Dosage should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

Supplied: Scored tablets—1 mg. (yellow); 2 mg. (pink); 4 mg. (white); 16 mg. (white). Also available—syrup, parenteral and various topical forms.

Request complete information on indications, dosage, precautions and contraindications from your Lederle representative or write to Medical Advisory Department.



LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.



IN ACNE
smooth
the skin—
cheer
the patient

Use of pHisoHex for washing the skin augments any other therapy for acne — brings better results. Now, pHisoAc Cream, a new acne remedy for topical application, suppresses and masks lesions — dries, peels and degerms the skin. Together, pHisoHex and pHisoAc provide basic complementary topical therapy for acne.

pHisoHex, antibacterial detergent with 3 per cent hexachlorophene, removes soil and oil better than soap — provides continuous degerming action when used often. pHisoHex is nonalkaline, nonirritating and hypoallergenic. When pHisoAc Cream is used with pHisoHex washings, it unplugs follicles, helps prevent

development of comedones, pustules and scarring. New pHisoAc Cream is flesh-toned, not greasy. It contains colloidal sulfur 6 per cent, resorcinol 1.5 per cent, and hexachlorophene 0.3 per cent in a specially prepared base. pHisoAc is pleasant to use.

A new "self-help" booklet, **Teen-aged? Have acne? Feel lonely?**, gives important **psychologic first aid** for patients with acne and describes the proper use of pHisoHex and pHisoAc. Ask your Winthrop representative for copies.

pHisoAc is available in 1½ oz. tubes and pHisoHex is available in 5 oz. plastic squeeze bottles and in bottles of 16 oz.

pHisoHex® and pHisoAc for acne
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Why Homer Jackson's work is important to you...

Talking on the radio-telephone is Homer "Bud" Jackson, both a scientist and a hard-working buyer for a company processing Florida oranges into frozen juice concentrate.


He has just made a decision that's important to you. He has analyzed some sample oranges from the grove in the background and found that they have the optimal amount of sugar, of acid,

and are of the proper texture. (Testing for vitamin C comes later.) Homer Jackson knows that these oranges are of a quality to meet the exacting regulations required by the Florida Citrus Commission.

These standards for quality in citrus products are the highest in the world. This is important to you and your patients because juice made from the best

oranges will be nutritionally best for your patients. It will contain abundant amounts of vitamin C and rich, natural fruit sugars.

It's good nutrition to encourage people to drink orange juice. It makes good sense to persuade them to drink orange juice that you *know* tastes good, has the right sugar-acid ratio, and is packed full of nutritionally important vitamin C.



Put your low-back patient back on the payroll

*Soma's prompt relief of pain and stiffness can
get your low-back patients back to
work in days instead of weeks*

Soma is unique because it combines the properties of an effective muscle relaxant and an independent analgesic in a *single drug*. Unlike most other muscle relaxants, which can only relax muscle tension, Soma attacks both phases of the pain-spasm cycle at the same time.

Thus with Soma, you can break up both

pain and spasm fast, effectively . . . help give your patient the two things he wants most: relief from pain and rapid return to full activity.

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only with higher dosages. Soma is available in 350 mg. tablets. Usual dosage is 1 tablet q.i.d.

The muscle relaxant with an independent pain-relieving action

SOMA[®]

(carisoprodol, Wallace)

 Wallace Laboratories, Cranbury, New Jersey



**How you can help save
your patients a month's pay**

Kestler reports in J.A.M.A. (April 30, 1960) that conventionally treated low-back syndrome patients required an average of 41 days for full recovery (range: 3 to 90 days). The addition of Soma therapy in this comparative investigation reduced the average to 11.5 days (range: 2 to 21 days). With Soma, patients averaged full recovery 30 days sooner.

ATHEMOL[®]

magnesium 3, 7-dimethyl-xanthine oleate

INDICATIONS:

Arteriosclerosis and its consequences:
hypercholesteremia, atherosclerosis, cerebral sclerosis,
xanthomatosis, etc.

An effective aid for symptomatic treatment of arteriosclerosis. Athemol improves the circulation and well-being of the patient. Favorable response in patients with such symptoms as vertigo, mental confusion, chest pain, headaches, etc., often observed within a one or two-month period.

DOSAGE:

One or two tablets t.i.d. Available in tablets of 200 mg. each. Athemol is easily tolerated, and can be administered safely over a prolonged period.

REFERENCES:

(1) Buck, R. C.: Minerals of Normal and Arteriosclerotic Aortas, Arch. Path., 51, 1951. (2) N. Ressler, et al.: Relation of Serum Stability to the Development of Arteriosclerosis, Amer. J. Clin. Path. vol. 24, 1954. (3) S. D. Jacobson, M.D., Wayne County General Hospital, Eloise, Michigan. To be published. (4) Prof. V. Patzelt, Untersuchungen über die Veränderungen der Bluteiweiß-Körper mit Mag. 3, 7-dimethyl-xanthine oleate, Klin. Med. 5, 11, 1956. (5) Dr. J. Skursky, Wiener Med. Wochenschrift, 1953, Nr 46, S. 886-887. (6) Eduard Keeser, M.D. and K. F. Benitz, M. D., Med. Klin. 1953 Nr. 15.



MEYER LABORATORIES

Detroit, Michigan

Communication Potentialities of the Printed Word

By JEAN WORTH, Editor, *Escanaba Daily Press*

(First of several installments of a paper presented before the 1961 MSMS
County Secretaries-Public Relations Seminar)

Any early belief that the conquest of the contagious diseases would cause a surplus of physicians and, inevitably, of money saved on doctor bills, has been long dispelled.

Any early belief that the brave new world of science with its marvels of instantaneous transmission of thought would solve our problems of communication is also dead.

Change has a habit of bringing along its own problems. Where a prime problem of communication long was quick transmission, now it is understanding of the great mass of matter so quickly transmitted.

* * *

IT IS NOW POSSIBLE to photograph the "back side" of the moon from a satellite, to go around the world underwater and to perform surgery on the human heart. These are rather recent developments. But not many years ago I reported the speech of a Michigan mayor who opposed expenditure of tax money on a sewage disposal plant because he was certain that cooking in aluminum utensils, and not germs in water borne sewage, menaced public health.

Literacy in Michigan is very high—almost complete, some of the optimists among us believe. We have never had such a production from the presses, so much newspaper circulation, so many books, nor so many radio broadcasts nor so much television programming. The new Michigan State Plan for Libraries aims to provide library service for everyone in Michigan.

Close to the eye, the picture is one to gladden the heart and make us believe, like Pippa, that all's right with the world. But our ability to read the printed word that flourishes everywhere brings us some disquieting information.

In Wisconsin last fall, when the people of our neighboring state were endorsing brave new frontiers in national politics, there were referenda in many cities on the fluoridation of public water supplies. In nearly all the cities voting, the proposal was defeated.

This method of assisting nature to reduce decay in children's teeth has been presented to the public as extensively researched and recommended by the American Dental Association, the American Medical Association, the U. S. Public Health Service and other organizations qualified to comment.

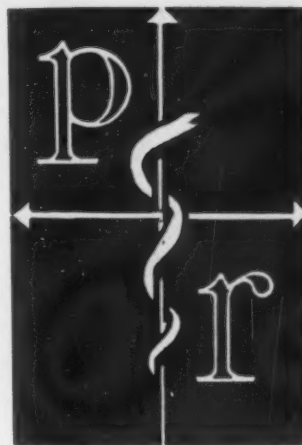
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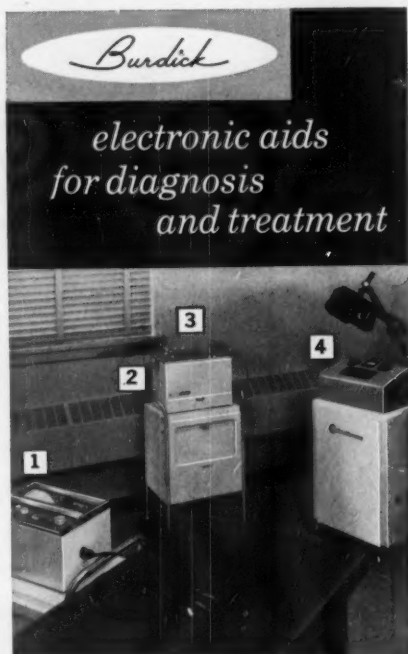
THE PUBLIC HAS been told that there are not enough dentists to care for all the dental work needed if it is all undertaken. Fluoridation is a safe means of reducing this need; of increasing dental health. The people were exposed to much information and misinformation on this issue and, in the exercise of their franchise as free citizens in this age of scientific medicine and scientific communications they rejected fluoridation.

This might be understandable if it had happened at Siskiwit

PUBLIC RELATIONS

707





With the advances and new technics in electronics as applied to medicine, efficient and practical equipment is now available for general office use—

- 1 **EK-III Dual-Speed ELECTROCARDIOGRAPH** — Lightweight, portable, accurate, simple to operate. 25 mm.- or 50 mm.-per-second speeds.
- 2 **UT-400 PULSED ULTRASONIC UNIT** — Continuous or pulsed energy. Compact, portable, six sq. cm. radiating area.
- 3 **MS-300 MUSCLE STIMULATOR** — Ideal for stimulation of innervated muscle tissue. Can be used in combination with the UT-400, as illustrated above.
- 4 **MF-49 SHORT WAVE DIATHERMY** — Versatile. Used with every type of diathermy electrode.

Complete information — including specifications and prices — on all Burdick electromedical apparatus is readily available from your local Burdick representative, or write directly to The Burdick Corporation, Milton, Wisconsin.

THE G. A. INGRAM COMPANY

4444 Woodward Avenue, Detroit 1, Michigan
Telephone: TEmple 1-6880

Harbor, Isle Royale, which is not much jarred by scientific change, but the city of Manitowoc, population about 30,000, where they make modern submarines, was among the cities which vetoed science.

In Michigan, our angry sportsmen are about to pressure the State Legislature to take scientific control of the deer herd away from the Conservation Department's biologists. The hunters are irked because there were fewer deer to shoot last fall than the fall before. That there would be fewer and that there may be fewer still next fall had been forecast by informed persons, because the large deer herd has seriously depleted its range feeds.

This is another rejection of the scientific method of research, discovery and remedy. These incidents are leaves in the wind of public opinion that show some serious misdirections.

Nor are they isolated instances. The Committee on Science in the Promotion of Human Welfare of the American Association for the Advancement of Science warns that "a growing disparity between scientific progress and the resolution of the social issues which it has evoked threatens to disrupt the history of man."

* * *

PUBLIC IGNORANCE, together with the growing importance of science as a military and political instrument, threatens to erode the integrity of science itself, the Committee states in urging scientists to acquaint themselves and the public at large with the technical aspects of pressing issues. And it asks scientists to accept the obligation to determine how new scientific advances are likely to affect human welfare and to call these matters to public attention.

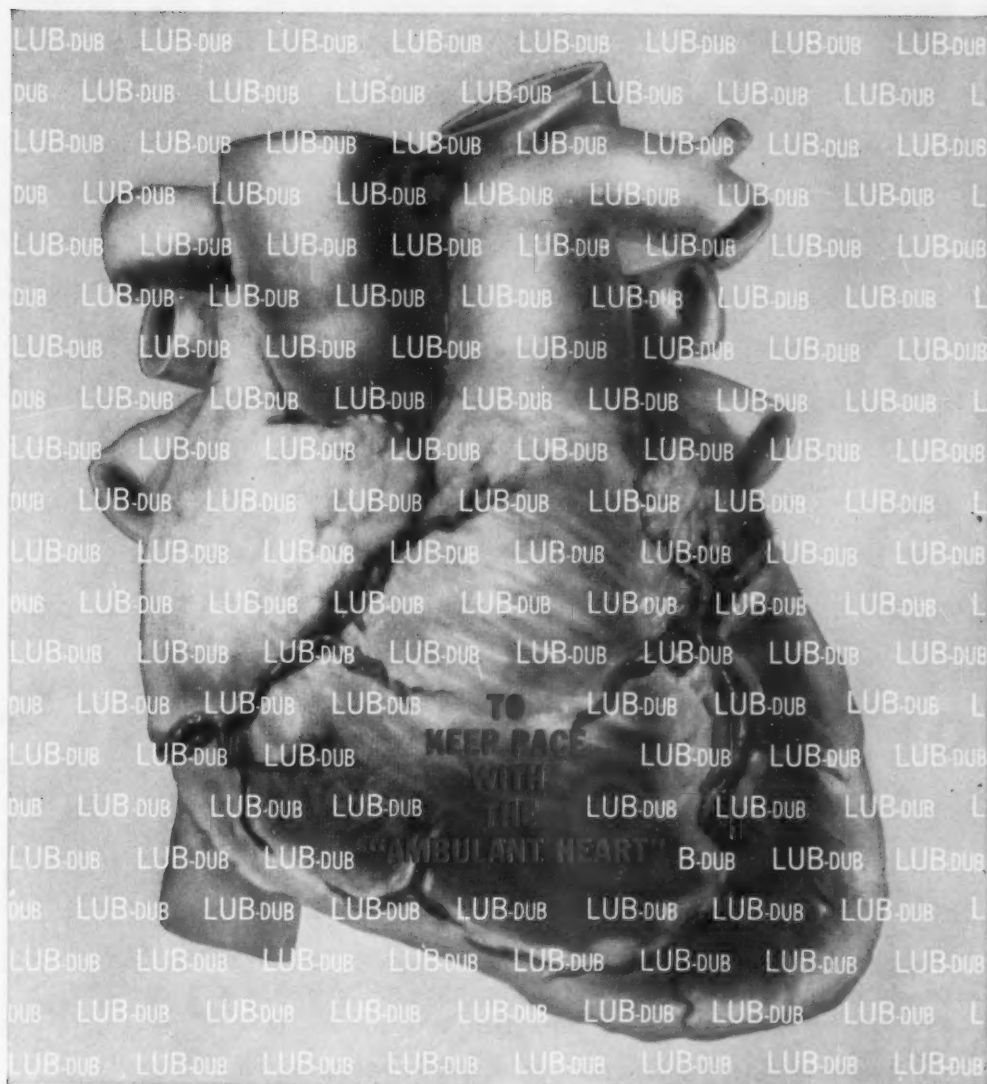
The need for such action is becoming increasingly apparent as public understanding lags behind scientific advance, but its correction will not be simple nor easy. The mechanical and electronic means for the needed communication exist, but obviously they are not performing the task adequately.

* * *

ALL DOCTORS OF MEDICINE MUST be hyper-conscious of this condition as they watch the trend toward government medicine. What they may not be so conscious of is their contribution, or lack of it, to the trend.

My assignment for comment in this workshop on public relations is the printed word. Wisdom doesn't necessarily come out of nearly 40 years of earning a living by the printed word, but certainly some familiarity should.

An American male baby born today can look forward to a working lifetime of 42.3 years—11.2 years longer than the working-life expectancy of a male baby born at the start of this century.



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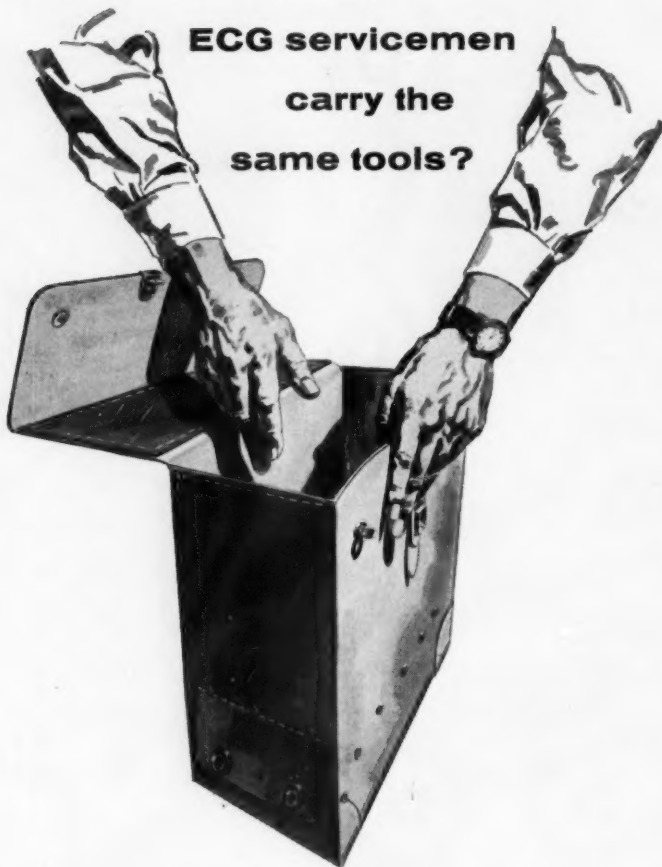
For gentle diuresis

In mild to moderate decompensation, DIAMOX closely matches diuretic action to diuretic needs. Gentle removal of water is achieved without distorting normal electrolyte ratios. A single morning dose provides comfortable, self-limiting daytime action and nighttime rest. Tablets of 250 mg. Parenteral, vials of 500 mg.

Request complete information on indications, dosage, precautions and contraindications from your Lederle representative, or write to Medical Advisory Department.

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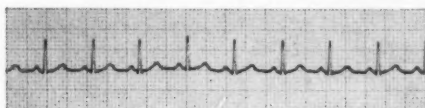
do all
ECG servicemen
carry the
same tools?



Perhaps they do . . . if you consider their "tools" to be only soldering irons, spare components, milliammeters and the like. But what about their training, experience, and personal interest in your satisfaction?

The men who service Sanborn electrocardiographs are qualified technicians — highly skilled and experienced in medical electronics. Their training and experience are important; but important, too, is their direct, personal interest in providing every Sanborn owner with competent, prompt, responsible service.

It's a "service tool" well worth remembering the next time you buy an electrocardiograph.



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NaClex[®] benzthiazide[®]

in edema
and hypertension
achieves 82% of
its diuretic effect
in six hours¹

NaClex works fast. Does its work quickly, thoroughly, safely—then lets your patient rest. Completes 82% of its excess fluid loss within 6 hours, over 96% within 12 hours¹ . . . an unsurpassed potency. Useful also in long or short-term treatment of congestive heart failure, obesity, pre-menstrual tension; 50 mg. tablets.

1. Ford, R. V.: "Human Pharmacology of a New Non-Mercurial Diuretic: Benzthiazide," *Cur. Ther. Research*, 2:51, 1960.

For more information, ask your Robins representative or write:

A. H. Robins Company, Inc.
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*As the greatest dental benefits of Sodium Fluoride are
derived during infancy and early childhood:*

**PEDIATRIC VITAMINS
PLUS SODIUM FLUORIDE**

provide
proper
nutritional
support
plus
prophylaxis
against
future
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caries



FUNDAMENTAL VITAMINS PLUS SODIUM FLUORIDE

**Funda-Vite® (F)
PEDIATRIC DROPS**

Each 0.6 ml. provides, 400 U.S.P. units vitamin D, 30 mg. vitamin C and 0.5 mg. fluorine (as sodium fluoride). Available in 30 ml. and 50 ml. bottles with calibrated droppers.

MULTIPLE VITAMINS PLUS SODIUM FLUORIDE

**Quanti-Vite^{T.M.} (F)
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Each 0.6 ml. provides, 3,000 U.S.P. units vitamin A, 400 U.S.P. units vitamin D, 60 mg. vitamin C, 1 mg. vitamin B₁, 1.2 mg. vitamin B₂, 1 mg. vitamin B₆, 10 mg. niacinamide and 0.5 mg. fluorine (as sodium fluoride). Available in 50 ml. bottles with calibrated droppers.

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FLUORIDE SUPPLEMENTS
DURING THE SUMMER

Daily administrations
of Funda-Vite(F) or
Quanti-Vite(F) should be
consistent and continuous
if substantial dental benefits
are to be anticipated.

For the irritable G.I. tract

Milpath acts quickly to suppress hypermotility,
hypersecretion, pain and spasm, and to allay
anxiety and tension with minimal side effects.

AVAILABLE IN TWO POTENCIES

MILPATH-400—Yellow, scored tablets of 400 mg. Miltown
(meprobamate) and 25 mg. tridihexethyl chloride.
Bottle of 50.

Dosage: 1 tablet t.i.d. at mealtime and 2 at bedtime.

MILPATH-200—Yellow, coated tablets of 200 mg. Miltown
(meprobamate) and 25 mg. tridihexethyl chloride.
Bottle of 50.

Dosage: 1 or 2 tablets t.i.d. at mealtime and 2 at bedtime.

Milpath[®]

[®]Miltown + anticholinergic



WALLACE LABORATORIES Cranbury, N. J.

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For your patients with infections or other illnesses who need therapeutic vitamin support. Each Theragran supplies the essential vitamins in truly therapeutic amounts:

Vitamin A	25,000 U.S.P. Units
Vitamin D	1,000 U.S.P. Units
Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Vitamin C	200 mg.
Pyridoxine Hydrochloride	5 mg.
Calcium Pantothenate	20 mg.
Vitamin B ₁₂	5 mcg.

SQUIBB  *Squibb Quality—the Priceless Ingredient*
*Theragran[®] is a Squibb trademark

“nutrition...present as a modifying or complicating factor in nearly every illness or disease state”¹

1. Youmans, J. B.: *Am. J. Med.* 25:659 (Nov.) 1958

cardiac diseases “Who can say, for example, whether the patient chronically ill with myocardial failure may not have a poorer myocardium because of a moderate deficiency in the vitamin B-complex? Something is known of the relationship of vitamin C to the intercellular ground substance and repair of tissues. One may speculate upon the effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic disease.”²

2. Kampmeier, R. H.: *Am. J. Med.* 25:662 (Nov.) 1958.

arthritis “It is our practice to prescribe a multiple vitamin preparation to patients with rheumatoid arthritis simply to insure nutritional adequacy . . .”³

3. Fernandez-Herlihy, L.: *Lahey Clinic Bull.* 11:12 (July-Sept.) 1958.

digestive diseases Symptoms attributable to B-vitamin deficiency are commonly observed in patients on peptic ulcer diets.⁴ Daily administration of therapeutic vitamins to patients with hepatitis and cirrhosis is recommended by the National Research Council.⁵

4. Sebrell, W. H.: *Am. J. Med.* 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: *Therapeutic Nutrition*, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

degenerative diseases “Studies by Wexberg, Jolliffe and others have indicated that many of the symptoms attributed in the past to senility or to cerebral arteriosclerosis seem to respond with remarkable speed to the administration of vitamins, particularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of aging persons is lowered, even to the danger point, more than is the case in the average American adult.”⁶

6. Overholser, W., and Fong, T. C. C. In Stieglitz, E. J.: *Geriatric Medicine*, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

infectious diseases Infections cause a lowering of ascorbic acid levels in the plasma; and the absorption of this vitamin is reduced in diarrheal states.⁷

7. Goldsmith, G. A.: Conference on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported In: *Medical Science* 8:772 (Dec.10) 1960.

diabetes Diabetics, like all patients on restricted diets, require an extra source of vitamins.⁸ “Rigidly limiting the bread intake of the diabetic patient automatically eliminates a large amount of thiamin from the diet. . . . There is some evidence of interference with normal riboflavin utilization during catabolic episodes.”⁹

8. Duncan, G. G.: *Diseases of Metabolism* 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: *Am. J. Med.* 25:708 (Nov.) 1958.

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Poly-unsaturated Wesson is unsurpassed by any readily available brand, where a vegetable (salad) oil is medically recommended for a cholesterol depressant regimen.

Your Cholesterol Depressant Diet Book

Menu plan for

Mrs. John Doe
DATE Feb. 1961

JOSEPH ROE

M.D.



STIMULANT CONTROL		1000 CALORIES	
breakfast	1/2 cup granulated sugar 1/2 cup milk Coffee or tea with 3 drops, skim milk	50	50
	TOTAL	100	100
lunch	4 oz. tomato juice 2 oz. drained tuna fish, surrounded with raw vegetables with 1 tbsp. French dressing 1 tsp. water Coffee or tea with 3 drops, skim milk	50	50
	TOTAL	100	100
snack	(May be had at mid-afternoon or evening) 8 oz. skim milk	50	50
	TOTAL	100	100
dinner	*1/2 portion Pickled Beets and Cucumbers, 300 cal *1/2 Baked Chicken Breast *Baked Asparagus 1 canned peach Coffee or tea with 3 drops, skim milk	50	50
	TOTAL	100	100

1000 CALORIES		1000 CALORIES	
snack	1/2 cup granulated sugar 1/2 cup milk Coffee or tea with 3 drops, skim milk	50	50
	TOTAL	100	100
lunch	2 oz. clear broth mixed with 2 oz. tomato juice or 4 oz. tomato juice 1/2 cup, 1 oz. tuna fish, drained, surrounded with raw vegetables 2 drops, French dressing 2 slices, whole wheat bread 2 slices, apple with 3 drops, skim milk, 1 tsp. sugar	50	50
	TOTAL	100	100
dinner	May be had at mid-morning or mid-afternoon 8 oz. skim milk Coffee or tea with 3 drops, skim milk	50	50
	TOTAL	100	100
snack	*Pickled Beets and Cucumbers 300 cal *1/2 Baked Chicken Breast *Baked Asparagus *Canned Peach Coffee or tea with 3 drops, skim milk, 1 tsp. sugar	50	50
	TOTAL	100	100

menu 1

lunch substitution

USE THIS HANDY ORDER FORM

The Wesson People, 210 Baronne St., New Orleans 12, La.

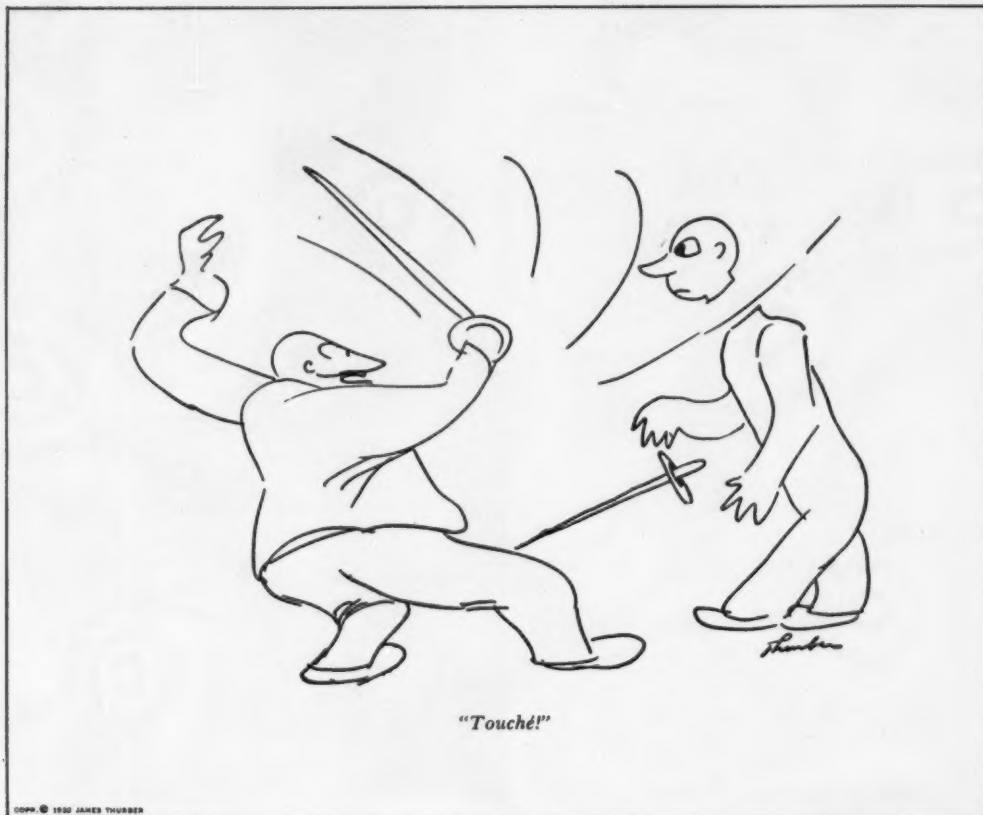
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Use of Analeptic, Anti-Depressant And Anabolic Drugs In Treatment of the Aged

Benjamin O. Morrison, M.D.
New Orleans, Louisiana

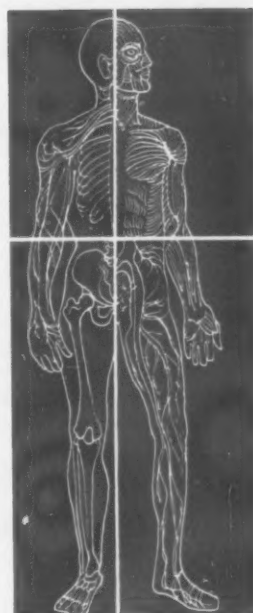
THE LENGTH in life span and the tensions of urban modern living have directed medical attention to the nature and treatment of degenerative diseases. Physicians see a steadily increasing number of geriatric patients. There is no universally effective method of treating the symptoms of senility.¹ However, there are three popular methods: treatment with analeptics, treatment with anti-depressants, and the use of anabolic type drugs. The apparent mechanism of action of the analeptic drugs is the stimulation of the central nervous system to overcome depression.² However, analeptics alone may be adequate in the treatment of central nervous system depression. In those cases of severe depression not helped by this type of drug, the geriatrician or practicing physician has at his disposal the far-reaching effect with steroids (Panogen) on the integrity of various body tissues.³ This article is not concerned with weighing the merits of one product or one method against another; however, because it is important to integrate these types of drugs to the best interest of the patient, it is advisable to mention, in brief, the indications and the results of therapy with each one of these three types of agents.

First, the Metrazol compound with vitamins and with nicotinic acid has been used by many of the earlier and distinguished geriatricians in this field. Chesrow and his colleagues⁴ were able to prove that a group of twenty-six out of thirty-two aged people responded favorably to oral Metrazol. Later reports by Smigel^{5,6} and Kass⁷ are favorable also and the side effects are reported as few and never serious. These findings compare favorably with those of this investigator.¹ Handley and colleagues⁸ found that Metrazol increased glycogen and glucose utilization by the brain, probably by increasing the permeability of cell membranes to normal levels and beyond. Although the mode of action of Metrazol is not understood precisely, it appears to stimulate respiration and, indirectly, circulation by acting upon the medullary centers and, to a lesser extent, on the cerebral cortex and on the entire central nervous system (CNS).^{9,10} This action is especially pronounced when the medullary centers are depressed. It minimizes cerebral hypoxia and exerts a general tonic effect. The use of nicotinic acid through vasodilatation produces the additive effect with improvement in circulation by improved cerebral oxygen exchange.

Presented at the Michigan Academy of General Practice,
November 9, 1960, in Detroit.

CLINICAL

723



Recently hexacyclonate, a new CNS-alerting agent or anti-depressant type drug, was evaluated by the author,¹¹ this evaluation being directed towards patients whose apathy was due to cerebral arteriosclerosis, chronic brain syndrome of various etiology, congestive heart failure, and all patients exhibiting varying degrees of decreased or abnormal mental and physical activity. This mode of action seems to be that of a drug having properties of both the monoamine oxydase inhibitors and analeptic drugs. Improvement is rapid—seven to fourteen days—and side effects are very few. It appears to have its greatest utility in the apathetic geriatric patient whose mental and physical activities have been slowed owing to changes in the brain brought on by senility. Improvement was also characterized by increased mental alertness, desire to cooperate with medical and nursing staff members, and strengthened appetite. Improvement was noted in forty-four out of sixty-one patients.¹²

The new anti-depressants in this category (Nardil, Marplan, Tofanil, Niamid, Deaner and Deprol) offer many advantages over the cortical stimulants, such as amphetamine, previously employed in the treatment of depression. These new preparations are long-acting, without depressive rebound, are gradual in onset, non-habit-forming, and do not overstimulate the individual by pushing him above the ideal normal adjustment. These drugs, combined with tranquilizers such as phenothiazine derivatives, are required for agitation secondary to the depression which represents the reaction of the organism to its recognition of the disease.

With the proper application of the balanced activation therapy, it is possible to eliminate electroshock therapy (EST) in 95 per cent of cases. It has been observed that the combined use of EST with a potent anti-depressant drug markedly reduces the amount of EST needed. This program of balanced activation places the patient almost immediately in the normal range of feeling and allows him to resume his responsibilities. Chemotherapy with an anti-depressant and, when needed, a tranquilizer, plays a major role

in rehabilitating these patients so that they assume a productive role in the modern society. Recently, nandrolone phenpropionate (Durabolin),¹³ a newly developed long-acting steroid, stimulates the synthesis of body proteins. The beneficial effect has been verified both pharmacologically and clinically by nitrogen balance studies.

In a recent survey by myself, an attempt was made to correlate this anabolic effect on senile patients with varying degrees of osteoporosis and osteoarthritis and compare these results with a similar group which had been administered sesame oil. In twenty-one patients ranging in age from sixty to ninety years, 50 mg. were given weekly for a period of twelve weeks. On the Durabolin, seven were improved as against three unimproved; in the sesame oil group, five out of eleven were improved, six unimproved. The mode of action seems to be the prevention of the progress of decalcification. Pain has been alleviated, appetite improved, body weight increased, and bone deformities reduced. Durabolin was not administered to patients with severe cardiorenal diseases or advanced carcinoma, although some patients with an associated carcinoma were given the drug without any harmful side effects. A study by the author¹⁴ on the use of Durabolin is to be published. Whereas young patients have been given these two drugs for other indications—postoperative convalescence, convalescence from pneumonia, fractures, asthenia, et cetera—my results are confined only to the use in this specific age group for combatting osteoporosis, anemia and asthenia due to metabolism. It has also been helpful to convalescence of peptic ulcer patients in conjunction with the original drugs used; that is, anticholinergic and antacid drugs with the modified Sippy regime. The use of Durabolin in these cases has been most gratifying, particularly in the older age group, in combatting negative nitrogen balance; that is, nitrogen retention. These patients when given 50 mg. of the drug showed improvement, such as gain in weight, appetite promotion, and improved digestion, within a period of three to four weeks.

Summary

The use of the analeptic, anti-depressant, and anabolic drugs, their indications for treatment, their pharmacologic and physiologic action in treatment of the aged, is reviewed. The research of the earlier geriatricians in this field of endeavor, as well as pertinent comments as regards my experience in research, are also noted. The specific indications for use of the analeptics with vitamins, nicotinic acid, and steroids to



The Author

**BENJAMIN O. MORRISON,
M.D.**

overcome central nervous system depression, symptoms of Meniere's syndrome and peripheral arteriosclerosis, and for those drugs which are recommended for each type of arteriosclerosis, is noted. The use and mode of action of the newer anti-depressant drugs—specifically for senile psychoses from cerebral arteriosclerosis, thrombosis, chronic brain syndrome of various ideology—and for those patients with increased or abnormal mental and physical activity, are discussed. Those drugs (sodium hexacyclonate, Marplan, et cetera), in combination with tranquilizers to combat agitation are recommended. These reduce the incidence of the use of electric shock therapy, as well as to promote normal range of feeling and responsibility.

The use of nandrolone phenpropionate, a newly developed, long-acting anabolic steroid to be used specifically to stimulate the synthesis of body protein, is discussed with its mode of action in those severely debilitated, asthenic, aged individuals exhibiting osteoporosis and osteoarthritis, as well as in certain cases of postoperative convalescence, convalescence from infectious disease, fractures, and asthenia.

Conclusions

The practicing physician has at his disposal newer drugs to alleviate patients in the aging process including circulatory disturbances, depressive states of psychosis, anemia, osteoporosis, postoperative convalescence, and convalescence from intercurrent infections. This represents a step forward in the right direction and will give the physician an aid in combatting these diseased states resulting from the deterioration of the arterial system. While these drugs do not effect a cure, they can improve the psychological, mental and physical status of these individuals.

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The Stopped Heart

External cardiac massage, a recently developed technique for restarting hearts which have stopped beating—without opening the chest—is the subject of a new medical teaching film released this week by Smith, Kline & French Laboratories.

The technique, which has been termed "strikingly effective," may well revolutionize the concept of reviving hearts that have failed. In more than 100 cases of cardiac arrest

treated by this method at Johns Hopkins Hospital, 62 per cent were successfully resuscitated to their previous cardiac and central nervous system status.

If external cardiac massage, combined with assisted ventilation, is begun within four minutes after cardiac arrest, the central nervous system will receive enough oxygen to prevent serious damage.

The Surgery of Deafness

II. Ossicular Chain Disruption

Brian F. McCabe, M.D.
Ann Arbor, Michigan

SINCE THE resurgence of interest in stapes mobilization procedures for otosclerotic deafness, the extramylingal tympanotomy has become a commonplace and benign aural operation performed by all aural surgeons. Since the development of this technique, the presence of an unexplained unilateral conductive deafness has come to be accepted as an indication for exploratory tympanotomy. In a significant number of such ears, a disruption of the ossicular chain behind an intact tympanic membrane is found to be the cause of the deafness. Most of these disruptions are amenable to repair by a variety of techniques utilizing autogenous tissue or prosthetic devices, and restoration of binaural stereo-effect hearing to the patient.

This enhanced ability to hear by virtue of two ears is one that is enthusiastically received by the patient, for reasons that we are only recently coming to realize. It was once thought that the only value of the second ear was to enable the subject to localize sound and respond more readily to sounds emanating from his deaf side. Indeed, the American Medical Association legal assessment of the percentage loss of over-all auditory function with one ear totally deaf, is 12.5 per cent. No surgeon who has seen the response of patients to the restoration of binaural hearing can hold this figure valid. It is becoming apparent that where the ears are concerned, one plus one equals more than two.

Causes of Ossicular Chain Disruption

The most common causes of ossicular chain disruption are suppuration, trauma, and developmental malformation. In all cases in this series, the break in continuity has involved either the incus or stapes and never the malleus.

The incus was at fault five times more frequently than the stapes. The long process and, in particular, the lenticular process of this bone was deficient or necrotic in nearly each case of post-suppurative disruption. This is undoubtedly due to the fact that of any portion of any ossicle, the lower third of the

incus has the poorest blood supply. Nourishment is derived chiefly through mucosal vessels from above which are endarteries, and through mucosal vessels from the capitulum of the stapes and the stapedius tendon. The exposed position of the long process of the incus traversing the tympanum adds to its vulnerability to suppurative destruction of nourishing mucoperiosteum.

Trauma may disrupt the chain at the incudostapedial or incudomalleal joint, or the stapedial crura. The first is the most common. Basilar skull fractures traversing the fossa incudis may dislodge the incus or immobilize it by bony impingement or fibrous adhesions. The incus may be disarticulated or removed entirely at the time of prior complete ("simple") mastoidectomy. Concussive head blows may disarticulate the chain at either joint or fracture-dislocate the stapedial crura. Manipulative attempts at extraction of a foreign body from the external canal is an occasional cause of disruption.

Congenital deformities commonly involve the ossicular chain behind an intact tympanic membrane, but more commonly behind an atretic canal where a canalplasty is necessary for hearing restoration. The canalplasty portion of the atretic canal operation is so much the more arduous and prominent problem when it is present that it should be considered as a separate topic and not here. When it is present, multiple anomalies of the middle ear are the rule, involving all three ossicles and all three joints. When the canal is patent, the disruption usually involves the proximal half of the chain, namely, the long process of the incus and the stapes. Both structures may be absent or represented merely by a filamentous fibrous remnant. Shortening of the long process may be present with a normal stapes since the latter structure develops independently from the incus. When the stapes is at fault, it is due probably to occlusion of the stapedial artery which courses between the crura from the fifth to the eighth week of intrauterine life. The proper development of the lenticular portion of the long process of the incus is probably dependent upon proper development of the stapes, because no cases

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of faulty stapedial development have been observed without a concomitant faulty lenticular process. Thus, the proper development of a portion of the incus seems dependent upon the stapes, but not the converse.

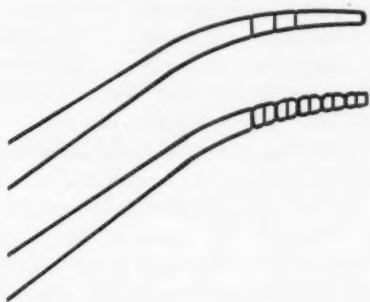


Fig. 1. Two types of measuring rods are useful, one scored at 3, 4, and 5 mm., and another with heavy scores each 1.0 mm. and light scores each 0.5 mm. The scores are visible when sighting down the shaft.

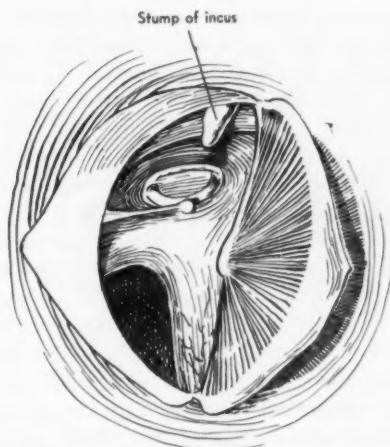


Fig. 2. The tympanum is opened extra-myringally using a V-shaped canal flap, and the exact nature of the lesion noted. Here, the lenticular process of the incus has been eroded by old suppurative disease and the long process is shortened.

Other causes of chain disruption include erosion and pressure necrosis by expanding lesions such as neoplasm and cholesteatoma. When either is present, elimination of this primary disease is of primary importance and not restoration of the disrupted chain. This is a proper subject for tympanoplasty, to be considered in a later article.

Diagnosis

The diagnosis of a disrupted ossicular chain may be suspected in the presence of a normal tympanic

membrane and a strongly negative Rinne test (bone conduction stronger than air conduction using a 512 or 1024 cycle tuning fork). The most likely diagnosis at this point is otosclerosis, but when the history in-

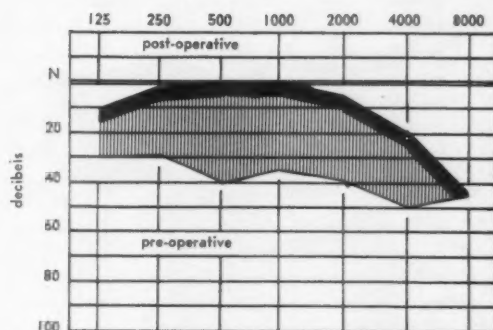
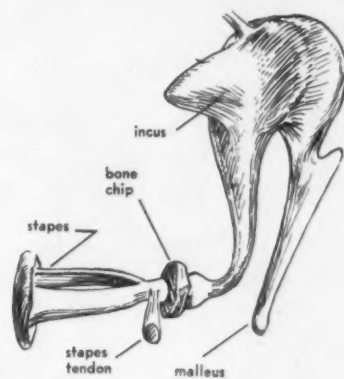


Fig. 3. When the incus is dislocated straight laterally from the stapes, a bone chip may be wedged in place to fill the gap.

dicates a precipitate onset or the lifelong presence of the deafness, otosclerosis may be considered most unlikely. In either event, exploratory tympanotomy is indicated.

It is when the tympanic membrane is abnormal that diagnosis may be difficult and the decision on the course of future action clouded. To a careful history and a meticulous examination, a knowledge of the normal and pathologic physiology of the middle ear conductive mechanism must be added in order to arrive at an intelligent decision. Certain guiding principles are:

1. With the tympanic membrane and ossicles removed, sound may strike the oval and round window membranes at nearly the same time, producing approximately a 45 decibel (db.) loss of hearing.

2. With the tympanic membrane only restored, this organ now acts as a sound-pressure impeding structure rather than a sound-pressure gathering structure, and hearing is reduced 15 db. further.

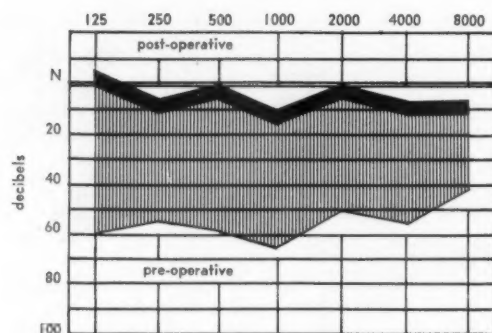
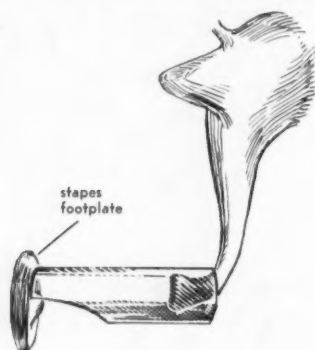


Fig. 4. The stapedial crura are readily replaced by a tapered polyethylene strut or a free bone graft.

3. This impedance quality of the tympanic membrane is variable and the figure 15 db. applies to the normal tympanic membrane only. If large areas of it are thin and atrophic, the impedance may be negligible.

4. If the oval window membrane is unable to re-

spond to sound vibrations, as in otosclerosis, the round window route may assume importance in sound entering the inner ear. The intact tympanic membrane may act as a sound barrier to this new route.

5. With a fixed stapes and only one window available to sound transmission, removal of the tympanic membrane would be expected to provide some improvement in hearing but this would be considerably less than 15 db.

Utilizing the above principles, a distinction between disruption of the ossicular chain and either otosclerosis or chronic adhesive otitis media can be made. In the latter two conditions, the audiogram may be similar because stapedial footplate fixation in otosclerosis and dense scar coating the ossicular chain in adhesive disease decrease hearing by the same mechanism. It is of course impractical to remove the tympanic membrane for diagnosis, but a wide myringotomy for test purposes will do as well. An audiogram is obtained before and after myringotomy, and the shift in hearing determined. This shift is usually diagnostic, but occasionally diagnosis requires tympanotomy and direct examination of the ossicular chain. The findings in each case leading to diagnosis are summarized in Table I.

It may seem academic to some readers to distinguish the three conditions preoperatively since a tympanotomy is usually indicated regardless of which lesion is present. In a sense this is so. But it is advantageous to both the surgeon and the patient to know as closely as possible the chances for success and failure long before entering the operating suite, first, because the relative chances for success or failure may materially alter the patient's decision to undergo a purely elective operation, and second, a patient's thorough understanding of what to expect from his operation is the surgeon's best protection against patient unhappiness and possible suit. For example, the chances for improved hearing are greater in the disrupted ossicular chain operation than in the other

TABLE I. DIFFERENTIAL DIAGNOSIS OF OSSICULAR DISRUPTION VERSUS FIXATION

	History	Appearance of TM	Degree of Deafness	Rise in Hearing Upon Myringotomy	Tympanotomy Findings
Disruption of ossicular chain	Head trauma or deafness from early childhood without progression	Normal to atrophic; healed perforations; less often thickened	Major: 40 to 60 db. loss	Average rise of 10 db. or greater	Visible disarticulation
Otosclerosis	Deafness from young adulthood with slow progression; no otalgia or otorrhea	Normal	Minor to major: 20 to 80 db. loss	Average rise of 5 db. or less	Mobile incus and fixed stapes
Chronic adhesive otitis media	Repeated otorrhea and otalgia	Thick heavily scarred, atrophic patches	Minor: 10 to 30 db. loss	Average rise of 5 db. or less	Fixed incus and stapes

two operations, and the chances for poorer hearing are greater in the otosclerosis operation than in the other two.

Methods of Repair

Repair of a disrupted ossicular chain may in each case be performed via the external canal through an extra-myringal tympanotomy under local anesthetic, and the patient may be discharged from the hospital the following day. The advantages of this approach over modified radical mastoidectomy and myringostapediopexy (where mastoidectomy is not for other reasons indicated) are obvious, besides obviating the mastoidectomy cavity.

The materials used for repair are stainless steel and polyethylene, and those native to the body where feasible. Both the prosthetic materials have been used in the middle ear for five years and in other places in the body for many more, and the literature is singularly lacking in reports of poor tissue tolerance.

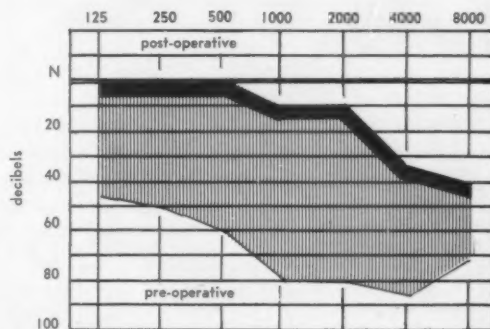
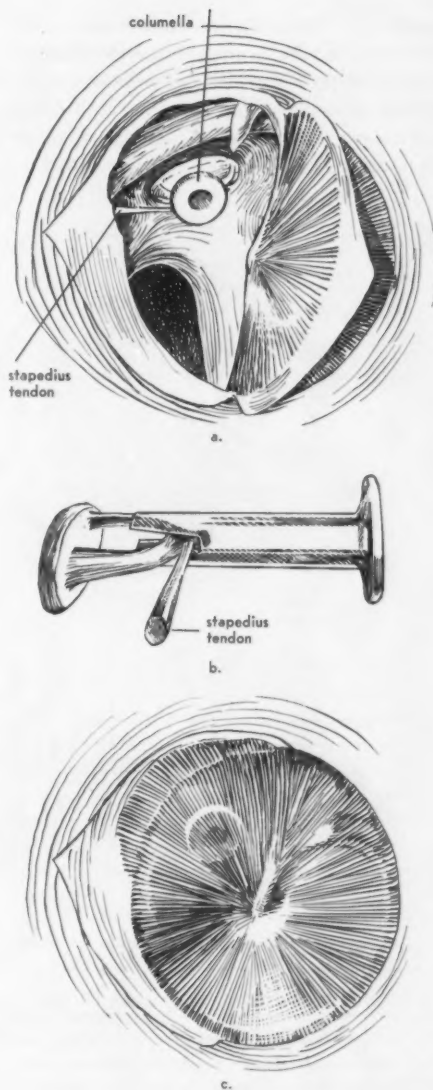
The primary principle in effecting a working repair is the interposition of a rigid structure between the oval window membrane and some moving portion of the tympanic membrane. Whether the angle of this structure is a mechanically advantageous one or not seems to make little difference in the final result; normal thresholds are attainable even when a strut approaches 45 degrees to the actuating or actuated surface. When a portion of the ossicular chain is utilizable it may be used, otherwise it is bypassed. Since the lever ratio of 1.5:1 provides a sound pressure advantage amounting to only 2 db., nothing much is lost when it is technically easier to disregard it.

A variety of different situations may be met, and each is dealt with according to the pathological conditions present and established principles of ear physiology. A number of these may be described which cover nearly all the situations that may be encountered, together with a method of repair which has been successful in our hands. Complete closure of the audiometric bone-air gap (conversion of the Rinne from negative to strongly positive) is accounted a success.

Class 1: Stapedial Lesions.—This is the easiest class of disruption to repair. Crural fracture-dislocation may follow a severe head blow. The crura cannot usually be replaced because of shortening of the stape-

Fig. 5. (a) The posterior bony canal has been cut back to enlarge the circumference of the annulus. A stapes polyethylene columella is in place. (b) A stapes columella straddles the head and also the crura, giving it stability. (c) With the tympanic membrane replaced, the centralizing effect of this on the columella-tympanic membrane point of contact can be appreciated. The membrane is tented out by the strut.

June, 1961



dial tendon. The crura are easily cleared away and a polyethylene tube interposed between the incus and stapedial footplate. The distance to be traversed is first carefully measured, from the face of the lenticular process down, with a special measuring rod. A strut is then cut 0.5 mm. longer than the measured distance

and bevelled on the medial end, care being taken to retain a flat surface on the bevelled end. The strut is placed, the extra 0.5 mm. slipping over the lenticular process.

A free bone graft has the advantage of obviating the insertion of a foreign body. It is however more difficult to fashion and more difficult to place, the average length of a strut being 4.0 mm. If the stapes fragment has not one crus long enough to span the gap, one may be fashioned from mastoid cortical bone. The proximal end should be tapered and the distal face cupshaped. Fears of resorption of the ends of a free bone graft strut crossing an air-containing cavity are in our experience unfounded.

Class II: Incudal Lesions.—These are of three varieties and comprise the most common class. The incus may be at fault by virtue of being shortened, dislocated, or absent, the result of either trauma, old suppurative disease, or congenital deformity.

The easiest situation to resolve is the dislocated incus displaced straight laterally, with the end of the long process a millimeter or two off the head of the stapes. A bone chip from the annular region tucked into the gap after freshening the opposing surfaces restores the chain.

A long process shortened by virtue of necrosis of the lenticular portion poses a different problem because frequently the bone at the tip is sugary and unable to hold a crimped wire. A solid connection is necessary for normal hearing to be attained. Various ways of meeting this problem have been described, but in our experience two variations answer most exigencies. If the long process is not shortened markedly and the stapediovestibular joint is supple, the stapes may be tipped superiorly and the head held against the long process while the new joint (after opposing surfaces are freshened) is coated with either dental cement or fast-curing epoxy glue. Dental cement will disintegrate after several month's exposure to moisture, but if there is any remaining blood supply in the long process, bony union will have occurred by this time.

Where the long process is shortened, or dislocated anteriorly or posteriorly from normal position, no great attempt need be made to bridge a wide gap because a stapes straddling polyethylene columella inserted as follows can provide normal hearing. Attempts to mobilize and relocate a displaced incus usually meet with failure, the disruption recurring on contraction of the original adhesions.

The stapes-straddling columella is a most utilitarian device for restoration of ossicular continuity. When

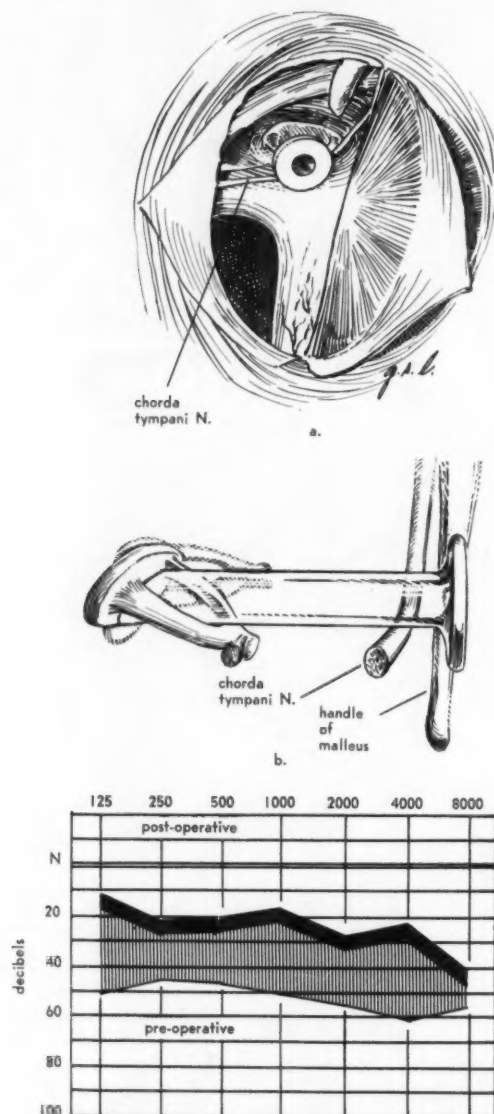


Fig. 6. (a) When the stapes tips too far downward to point a straddling columella toward the tympanic membrane, a footplate columella can gain adequate support by nestling it in the arch of the crura and supporting it in the sling of the chorda tympani nerve. The outer end then abuts the tympanic membrane. (b) The usual, nearly horizontal, position of the stapes is indicated in shadow outline.

this device was first used, closure of the bone-air gap was a rarity. Subsequently, two modifications were introduced which have produced uniformly good results. It was found that the principal cause of a failure was due to a tendency for the outer end of the columella to come to rest against the postero-superior annular rim. This decreased hearing is by two mechanisms: first, through the damping effect of the bony canal wall on columellar vibration, and second, by virtue of the minimal vibrating excursion imparted to the columella with its placement peripherally near the anchored rim of the tympanic membrane. This tendency was circumvented by redesigning the strut so that it straddled not only the capitulum but the stapedial crura thus giving it stability, and by cutting away the postero-superior bony annulus far enough to increase the surface area of the tympanic membrane. The surface area is, in effect, increased by recruiting canal skin in this quadrant, and has the further desirable effect of centralizing the columella on the tympanic membrane by moving the periphery of the tympanic membrane outward. Finally, in order to effect a slight tenting-out of the tympanic membrane, the strut is made 1.5 mm. longer than that measured distance between the head of the stapes and the tympanic membrane. Careful study of a number of successful modified radical mastoidectomies revealed one thing in common: the head of the stapes was clearly visible as it tented out a tympanic membrane draped tightly over it.

In event the stapes cannot be used for a straddling strut, the columella is extended to the footplate, with its outer end cradled in the sling of the chorda tympani nerve and its end against the tympanic membrane. The outer end is flanged wide and flat. The desirable degree of flanging is produced by heating the end of the tube to the melting point near an open flame, then bringing it quickly into contact with a cold metal flat surface. PE90 is the most frequently used size.

Frequently a combined procedure is necessary to rehabilitate the hearing mechanism, such as a sliding flap (viable bipedicle flap) myringoplasty and ossicular chain repair. In order to avoid placement of the outer end of the columella against the inner aspect of the flap, the columella may be notched sharply with very pointed notch tips and placed under the handle of the malleus 2 mm. above the umbo. The relatively high amplitude of vibration near the umbo compensates for the greatly disadvantageous angle at which the strut functions. The inner end should be tapered and wedged against the anterior aspect of the pos-

terior crus at the footplate. If the stapes is intact and the anterior crus lies in the path of the strut, the crura should be sacrificed in 1 mm. above the footplate with a cruratomy. Just prior to strut placement, the anterior

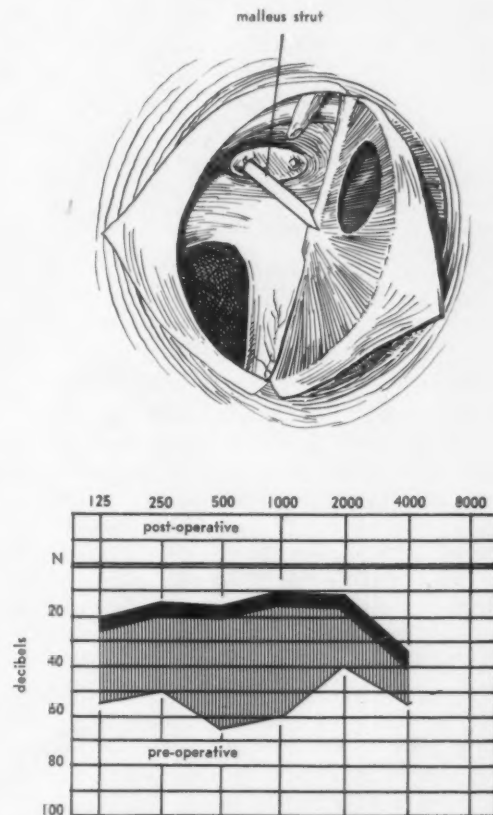


Fig. 7. Before repairing the perforation in the reflected part of the tympanic membrane by the sliding flap technique, the chain is repaired with a polyethylene malleus strut. This strut must be notched deeply at the malleus end, and rested securely against the stump of the posterior crus. If promontorial bone interferes with positioning, it should be cut back as in Figure 8.

slope of the oval window niche should be saucerized or flattened beneath a replaceable mucoperiosteal flap.

Class III: Combined Lesions.—When the incus and stapes are both at fault, the situation may be remedied with either a footplate-tympanic membrane or footplate-malleus columella as described above. The most difficult problems however are those of a faulty incus together with a fixed footplate or malleus, or both.

The more common lesion involves a fixed footplate and an absent incus, as seen in a fenestrated ear with bony or fibrous closure of the fenestra. The first meth-

od of correction tried met with nearly uniform failure. The operation constituted a vein plug stapedioplasty replacement of the footplate with the vein plug wire curved over to and crimped around the handle of the malleus. The reason for failure is obvious. The wire

must be malleable enough to allow crimping around the malleus. The slight arch the wire describes in its course out of the oval window niche and toward the malleus is enough to allow vibrational absorption to occur before the impulse arrives at the vein plug in the oval window. The operation is now done in two stages. Vein plug stapedioplasty is first carried out, leaving the wire only 3 mm. above the vein. Three months later, after the vein plug is solidly scarred into place, the wire is sheathed with polyethylene. This sheath is then adjusted to constitute a strut to the malleus, anchored firmly at its medial end by wire.

If the malleus is the fixed ossicle, as it is in end stages of chronic adhesive otitis media, the head is the structure fixing it by attic scarring. Before a strut may be applied to it the handle must be rendered mobile. This is done by sawing through the neck of the malleus and inserting silastic film or silver foil between the cut edges, in order to insure the development of a pseudarthrosis here. If the malleus is fixed the incus will be also, and this ossicle should be dissected free or pushed on up into the attic and bypassed. In a second stage, a malleus-footplate strut is placed. If the footplate is also fixed, it may be replaced by a vein plug during the first stage. Where the tympanic membrane itself is severely scarred, thickened, and immobile, surgical intervention is probably contra-indicated.

Summary

A significant number of conductive hearing losses are due to a disruption of the continuity of the ossicular chain. The cause of the disruption may be traumatic, developmental, or the result of old suppurative disease. This discontinuity behind an intact tympanic membrane may be determined preoperatively in most cases. It is possible, with a knowledge of how the ear works, to restore the sound conduction mechanism by a variety of measures depending upon the type of disruption.

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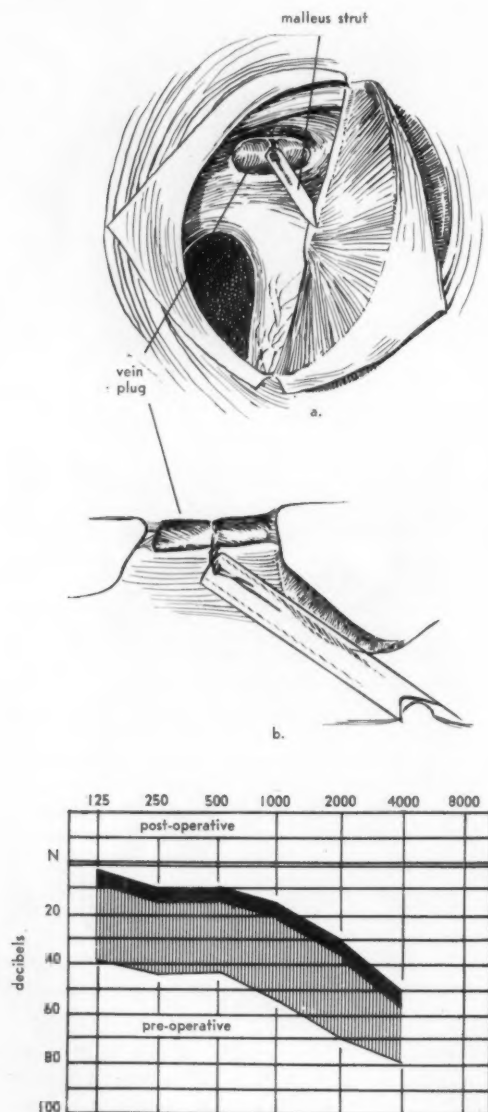


Fig. 8. (a) In the second stage of a fenestration repair, a malleus strut is placed over the wire from the vein plug stapedioplasty inserted at first stage. (b) The wire, scarred firmly in place, anchors the proximal end of the malleus strut. Note the promontorial bone, where it would interfere with free vibration of the strut, has been cut back beneath a replaceable mucoperiosteal flap.

Prolonged Labor

F. J. Hofmeister, M.D.
D. Barbo, M.D.
Milwaukee, Wisconsin

THE PLANNED ATTACK to intelligently and effectively combat prolonged labor must begin in the obstetrician's office with the primigravida's first prenatal visit. This determined effort to materially reduce and, if possible, eliminate prolonged labor must continue with each succeeding pregnancy, whether first or fourteenth. Remember, the state of multiparity does not assure uncomplicated prepartum, delivery and postpartum periods. On the contrary, multiparity may result in complacency of physician or patient, or both, and add to complications. It may actually be a hazard.

How then shall we pursue this problem?

At the outset, we must agree upon what we are attempting to combat. It is essential to realize that not all rhythmic contractions occurring at or near term are labor. Patients, because of contractions, will enter the labor rooms expecting rapid labor and delivery. Examination will reveal long, undilated cervices. They will insist that labor pains have existed for six to eight hours. The Braxton-Hicks contractions of so-called "false labor," have frequently been added to the labor time to statistically and erroneously greatly prolong some labor records.

Labor can only be considered present when rhythmic contractions result in progressive effacement and dilatation of the cervix and, ultimately, in delivery of the baby.

Failure to recognize this definition and the possible existence of "false labor" can create complications. An abstracted case from a State Maternal Mortality Survey is presented:

A Gravida IV, Para III, had been in "labor" for eight hours. The cervix was 2 cm. dilated. (This is not an unusual state for a multiparous cervix in a patient not in labor). The physician was dissatisfied with the progress and a sterile vaginal examination was done. (This is a commendable procedure when necessary and intelligently done). During this vaginal examination, the cervix was manually dilated to 5 cm. (Manual dilatation is manual laceration—a mutilating

procedure that should never be done). Single-shot injections of increasing amounts of Pitocin were administered until 64 minims were given (enough to propel the infant through the navel). Although contractions increased, the physician was dissatisfied and a second sterile vaginal examination was done. This time the cervix was further dilated to completeness, the membranes were ruptured, and a version and extraction done. A stillborn infant was delivered. This was followed by the placenta and profuse hemorrhage. The patient expired.

It is unnecessary to tell you that this extraordinary collection of an accumulation of episodes of faulty judgment and faulty procedures resulted in a fatal ruptured uterus. It is necessary to return to the original point of question. Was this patient in labor when these procedures were started? It is essential that this be answered. Many unnecessary Cesarean sections and traumatic deliveries could be avoided if this question were answered before active intervention.

What is prolonged labor? Opinions vary considerably among all who have discussed this subject. Greenhill¹ designates eighteen hours in the primigravida to indicate prolonged labor. Gainey uses twenty-four hours as the time limit. Calkins² varies his time limits with the conditions of the case and indicates the usual instance of prolonged labor to be nineteen hours, with variations up to twenty-four and thirty hours. He indicates that hazard to mother and infant is not usual at twenty-four hours, but is a reality after thirty hours. It is necessary to indicate and emphasize that for some patients, six hours of labor is prolonged. Where faulty prenatal care has been given and marked disproportion or faulty presentation exists, unrecognized, the extent of any labor is a prolonged

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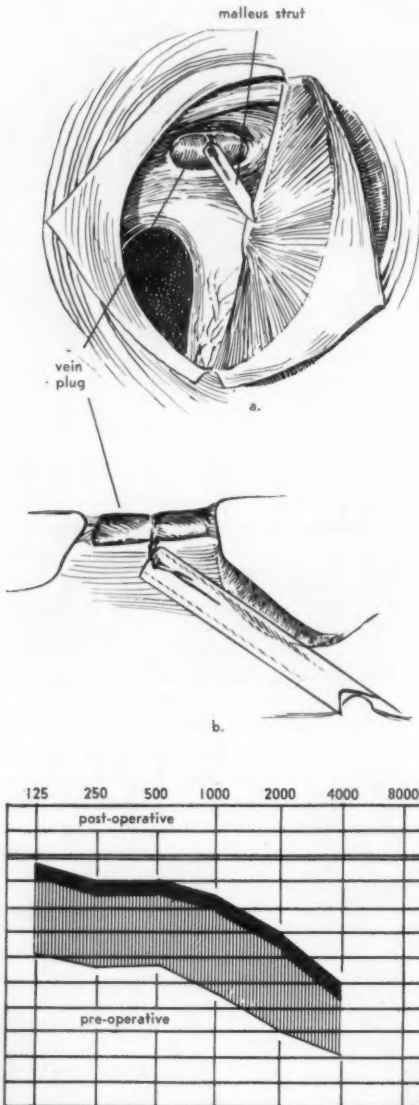


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labor. It has been our concept that the primigravida will deliver in between twelve to twenty hours. When questioned by the primigravida concerning what she is to expect, she is told this is the average. The multigravida can be expected to deliver in eight to twelve hours. Labor is considered as prolonged at Milwaukee Hospital after twenty hours. This is considered as the point of action unless clinically indicated earlier.

What is the incidence of prolonged labor? This incidence varies because of various standards. Daro and Collin⁴ of Cook County reported an incidence of 3.9 per cent for labors over eighteen hours. Eastman⁴ reported 8.4 per cent with labors over twenty-four hours and 4.9 per cent with labors over thirty hours. Doctor Gainey³ reports an incidence of 1.42 per cent with labors over twenty-four hours. The statistics of Milwaukee Hospital were reviewed for the year 1959 as a spot check. A total of 2,413 infants were delivered. Of these, thirty (1.24 per cent) had labor over twenty hours, with sixteen (0.66 per cent) over twenty-four hours. There were eight sections. Twenty-six per cent of prolonged labor cases were sectioned as compared to an over-all 5 per cent section rate. Six of these sections were done in patients who were in labor over thirty-one hours. The longest was forty-eight hours. One of the sections was in a breech. Breech was a factor in prolonged labor six times. All of these patients were primigravidas except three. The ages ranged from sixteen to forty-four years.

It is evident that the prolonged labor incidence at Milwaukee Hospital is low and compares with institutions that report incidences as low as 0.5 per cent.

What has been the policy? It should again be emphasized that the attack on the problem of prolonged labor must begin with the prenatal period. Long emphasized for its value in combating toxemia, exacting intelligently conducted prenatal care has a much more inclusive effect on the entire obstetric experience of women.

An essential component of this prenatal care is the combination of an accurate history and the complete physical evaluation of the woman. Knowledge of hereditary tendencies or of existing abnormalities coincidental to the pregnancy may be essential to successful delivery of a living infant and preservation of the mother. The habit of exacting history and physical, fundamental in all branches of medicine, is extremely essential in the gynecologic examination complicated by pregnancy. Continued accurate care and intelligent observation during this important pre-

natal period will result in detection of conditions which may indicate the possibility of prolonged labor and often preclude vaginal delivery. This observation must include careful evaluation of pelvic capacity, attempted estimation of fetal size, and determination of fetal presentation. Near term, if routine evaluation indicates a failure of the presenting part to engage, or if there is indication of malformation or malposition, it is advisable to obtain an x-ray examination. This will result in determining actual measurements of fetal head as compared to pelvic inlet, midplane and outlet. X-ray should be used where clinical examination indicates the suspicion of midplane contraction. Prolonged labor with its hazards as a result of undetected, undiagnosed midplane contraction will result in far greater damage to an infant than intelligently requested, expertly done x-ray evaluation at or near term. X-ray should be avoided in first and second trimesters. Let us wisely, without hysteria, evaluate and use x-ray—this very valuable adjunct to the successful practice of almost all branches of medicine. But let us remember also that x-ray techniques and interpretations are no better or safer than the man or woman behind the x-ray. All have attended the patient who was doomed to section by x-ray interpretation, only to have her deliver precipitously and most unsuspectingly. All have attended the other patient who, as prognosticated by x-ray, was expected to deliver "in a breeze." This patient would still be laboring if repeated clinical examination and consultation had not pointed to the necessity of Cesarean section.

The detection of obstructing tumors of the birth canal can only be accomplished by instituting routine re-evaluation of the pelvis by carefully done vaginal examinations at the fourth, and seventh month and again near term. This will prevent the catastrophe of surprise and eliminate the torture of suffering through prolonged, dangerous, unproductive labor which can result from an obstructing fibroid or ovarian tumor. Remember, there is no rule which outlaws a carefully done vaginal examination regardless of the period of gestation. However, there are many strong supportive arguments to uphold these examinations.

Additional rewards are recognized for the patient and physician who co-operate in making each prenatal visit an intelligent evaluation of gestation progress and the patient's physical status. The patient must be placed on the table at each visit so that progress of increased fetal size can be noted and the fetal heart can be checked. Careful palpation by Leopold Maneuvers will reveal errors of position and/or presentation. Additional evaluation of the patient by rectal ex-

aminations will aid in the detection of abnormalities including the problems of the anencephalic infant or the hydrocephalic infant. These detected abnormalities, if known, can be integrated into planning and hazards to mothers and infants greatly reduced by anticipation of complicated labors and use of adequate correct procedures when labor starts. Statistics by Cosgrove⁴ indicate that these detectable abnormalities accounted for 57.5 per cent of the causes of prolonged labor in a series from his institution. Other figures vary down to 13 per cent. It is safe to assume that, conservatively estimated, cephalopelvic disproportion and the existence of faulty position is a factor in 20 per cent of the instances of prolonged labor. In the reported series of prolonged labor at Milwaukee Hospital, breech existed six times—an incidence of 20 per cent. Though recognized as a factor position in 3 per cent of all obstetrical cases, breech occupied a prominent place in prolonged labor cases. This incidence of disproportion and faulty position as a factor in prolonged labor can be maintained at a minimum if examinations are intelligently conducted during the prenatal period. Many unproductive prolonged labors which are destined to eventually terminate in Cesarean section or fetal wastage, after prolonged trial and failure, can be avoided by earlier intervention.

Another valuable weapon in the continued fight against the menace of prolonged labor is a proper personal introduction to your patient and an attempt at adequate psychologic conditioning of this patient during the prenatal period. The quality of the seed of confidence planted by the initial impression you make with your patient will grow into her recognition of full security in your care and judgment. A poor impression will create insecurity and can result in a running battle of challenging questions and continuous debate throughout the prenatal period.

Though the physician need not swing on the hysteria of so-called Natural Childbirth, it is essential that he recognize the important contribution made toward relaxation of patient tensions by encouraging expectant mother and parent education. Part of this can be accomplished in the physician's office, part can be done in the many well-organized parent classes² which are a part of your hospitals and should be a part of every hospital caring for obstetrical patients. It is the physician's responsibility to direct attention to the many safeguards that have been developed in the past twenty years and the resultant progress made in America in the reduction of maternal mortality to an almost irreducible minimum. In one institution this

progress has resulted in a decrease from one death in every 182 deliveries in the period before the 1930's, to one in 11,000 deliveries at present. The reduction of fetal wastage is also rapidly approaching this irreducible status. It is essential that young American mothers are made aware of the persistent drive of the American obstetrical team, led by you, the American physician. Such teamwork has resulted in the fact that America leads all nations: America is the safest place in the world in which to conceive and deliver an infant. With this knowledge, with proper parent education, with the assurance of good health as the result of adequate prenatal examination and care, the expectant mother will advance to the labor and delivery room full of confidence, relaxed to face the contractions of labor and the tremendous experience of labor as a normal process. Such relaxation will reduce requirements for analgesic and amnesiac medication. This reduction of medication removes a source of potential interference with the effectiveness of the labor mechanisms and finally results in a reduction of the incidence of prolonged labor. It is essential that we be instrumental in removing the concept of pain and suffering as associated with the processes of labor. This education can extend even to some churches where altar prayers of Thanksgiving for safe delivery of infants include such conditioning phrases as, "That Thou has protected this mother through the perils and pains of childbirth."

Labor and Delivery

Finally, the moment is at hand. There is a gush of water. There may be a show of blood. There may be evidence of regular contractions. A combination of any two or three may exist. Your patient will not panic. She has been indoctrinated in what to expect. She has the assurance that she is welcome to call you and can contact you or your designated associate, day or night, for assurance and direction. She enters the hospital with reassured confidence and, it is our hope, this will be further increased by the kind and considerate assistance of the registration personnel, and the labor and delivery room staff of nurses and physicians. You, the physician, have the confidence of knowing that many of the problems, of gross deformity and abnormalities, have been detected and eliminated as hazards through your adequate prenatal care and anticipation when labor starts. The result: systematically observed labor can progress.

After it has been established that actual labor exists, you may expect the primigravida to deliver in twelve to twenty hours. You know that from one to 1.5 per

cent of your patients will be in labor over twenty hours. This knowledge should create an alertness which will prepare you for the prolonged case when it occurs. You should be especially alert when attending patients with a dyskinetic labor, where breech exists, when premature rupture of membranes exists—associated with a long, unprepared cervix, or where malpositions exist.

When labor reaches the twenty-hour period, the time which is designated as the warning signal, what is the course? Certainly, this does not mean the patient must be delivered because an arbitrary danger line has been reached. It does mean that if delivery is not imminent, the red flare of danger has been ignited, indicating the necessity for a complete patient and progress re-evaluation.

This re-evaluation should be systematic. It should include a review of the patient's labor record up to the time of concern. The intake and output of the patient should be examined and the state of hydration noted. Fluids adequate to establish hydration and nutrition should be given. The character of the contractions must be evaluated. It is well to note that twenty hours of ten-minute contractions are less significant than twenty hours of three-minute contractions. The amount of sedation which has been administered should be determined. A careful sterile vaginal examination should be done to detect problems of position or presentation and definitely establish the degree of dilatation. The character rate and quality of the fetal heart tones must be checked often. If the membranes are intact, an amniotomy may be indicated. Ineffectual labors have converted to productive labors in short order after membranes have been ruptured. No damage can be done if the presenting part is engaged and if the presentation is cephalic. It may be that at this time, clinically, indications point to the necessity of x-ray evaluation.

X-rays should be taken and may reveal the illusive midplane contraction or a straight sacrum, or both. They may disclose malformation or disproportion, or confirm abnormal position. This re-evaluation will be incomplete unless the opinion of another physician, impartial and unrelated to the problem case, is requested. The impact of consultation can be great. The consultation may result in the opinion to further adjust fluid balance, to rest the patient and later stimulate and reactivate labor with intravenous drip Pitocin, or to actively intervene. Consultation may eliminate the hysterical confusion resulting from indecision—indecision resulting from pressure of the patient's family, indecision resulting from pressure due

to the physician's own commitments. These pressures or apparent obligations may result in the injudicious use of such procedures as version and extraction which, today, has only limited indications; Dürchen's incisions, which can create lasting defects unless accurately made and repaired, and traumatic forceps applications and deliveries. Be aware of the hazards and recognize your responsibilities when Pitocin or Syntocinon are used. Real danger may exist for the primigravida and multigravida (especially old multigravidas) with administration of stimulation, for stimulation may result in rupture of the often traumatized lower uterine segment. The patient's personal response to the stimulation may be such that tetanic contractions will result. This creates great hazard to the infant and can also result in precipitous expulsion of fetus with resultant extensive vaginal, cervical and/or uterine lacerations. It is the physician's responsibility to be available for emergency or have a designated professional representative available to cope with any emergency and to avoid the catastrophe which can result when oxytocics are administered.

Remember, statistics indicate that after thirty hours there is progressive hazard to both mother and infant. Probably after thirty hours, we are stepping from prolonged labor to neglected labor. If re-evaluation has occurred at twenty hours, and progress has not been satisfactory after rest and hydration, the mode of attack should be Cesarean section. Antibiotics will have been started after twenty hours regardless of ruptured or intact membranes. It is recognized that after twelve hours of active labor, positive cultures can be obtained from the amniotic fluid even when membranes are intact. With intelligent observation and accurate care, the result should be excellent. We point to the fact that in the thirty instances of prolonged labor studied at our institution, which included eight sections, there were no maternal or infant deaths or neonatal problems. There were twenty-two stillbirths and thirty-six neonatal deaths in the 2,413 deliveries. These statistics can be multiplied by many years in our institution and, I am sure, by many institutions throughout the country. The time is at hand that we recognize the necessity of an intelligent approach based on careful evaluation. We must cast aside antiquated methods of obstetrical gymnastic procedures and obstetrical tricks for Cesarean section, when that is indicated. It is time to disregard some arbitrary statistical ceiling which has been set to regulate our judgment when confronted by the decision for Cesarean section. Poor results by section for mother and infant will increase in direct proportion

as length of labor increases beyond thirty hours. This should not mean that we are to set aside caution, policy and indications for what some erroneously consider convenience. Sections still are associated with every hazard of major surgery. If done when indicated, the over-all section rate will not go beyond 5 or 5.5 per cent, and many infants will be salvaged.

The pattern of a patient's future childbearing, indeed the question of whether she will ever conceive again, may depend upon the conduct of her labor and the memory of her delivery experience. Make it a gratifying experience!

Summary and Conclusion

An attempt has been made to indicate the necessity for persistent effort by the obstetrician to combat the entity of prolonged labor. This must start in the prenatal period by complete examination, evaluation and care, and by instilling within the patient confidence in her physician. It continues through the management of labor and delivery, with emphasis directed to the fact that the patient who is informed and has confidence will have a naturally decreased labor time. Although seemingly contradictory, we must admonish

that complacency on the part of the physician or patient, or both, because of the tendency to emphasize naturalness, must never be permitted to replace intelligent care by a physician who is well trained to observe, care for, and actively intervene with Cesarean section when necessary—instead of using antiquated obstetrical tricks. It must always be emphasized that the practice of obstetrics is major surgery and that, when least expected, complications may arise which may require surgical skill, or which may result during a fleeting short moment in the elimination of a life because of faulty judgment or the use of a faulty procedure.

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Purified Platelet Cofactor I and Purified Autoprothrombin II in Thromboplastin Generation Test

Purified bovine platelet cofactor I substituted for adsorbed plasma in the thromboplastin generation test when Ac-globulin was also supplied. Only 70 gamma/ml. were needed. Purified bovine autoprothrombin II substituted for serum in the test. Only 9 gamma were equivalent to serum. Platelet cofactor I thus takes the place of the antihemophilic factor and autoprothrombin II substitutes for PTC and Stuart-Prower factor. We regard the autoprothrombin II preparation

used as a single component derived from prothrombin. Because platelet cofactor I, platelet cofactor II, Ac-globulin, and platelet factor 3 are not enough to obtain optimal activity, one or more factors are needed in this test. It could be PTA, Hageman factor, or another prothrombin derivative.—ORHAN N. ULUTIN, EBERHARD F. MAMMEN and WALTER H. SEEGER, 1961 Symposium on Blood, Wayne State University, College of Medicine, Detroit.

Implementation of the Diagnostic Center Law

A Study of a Rapid Treatment Program

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ACHIEVING a more effective relationship between law and medicine in the management of mentally ill patients has been the goal of the psychiatrist since the late 18th century when Pinel first released the insane from their chains and separated them from the common criminal. Legal intervention has always been deemed necessary—both in order to protect society from acts committed by the sick individual during his illness and, also, in order to protect the individual from neglect and the abuses heaped upon him by society.

With the widespread use of the phenothiazine compounds for tranquilization, the acute or dangerous phase of most psychotic illnesses has been shortened far beyond the period of time required legally to achieve commitment status for the patient. Legal procedures tended to perpetuate abuses of a system of institutionalization which were contrary to the medical welfare of the patient.

With the signing by the Governor of Michigan of Public Act No. 159 on April 16, 1956, the principle of the diagnostic center was established. The law reads in part:

"If it shall appear to the court or jury that there is evidence from the doctors' certificates and from evidence produced in court that such person is mentally diseased, the court shall order such person to be removed to a regional diagnostic center for diagnosis, care and treatment for a period not to exceed 60 days, which period may be extended up to an additional 60 days by special order of the court upon request of the superintendent of the regional diagnostic center."¹

Similar laws had been passed in the states of Wisconsin and New Jersey; however, they were designed to provide rapid diagnostic services for juveniles.²

Act No. 159, as passed, seemed designed mainly to facilitate the psychiatric evaluation and treatment of citizens in the areas of the state where psychiatric hospitals were distant, since private hospitals could be utilized. It also provided the already crowded State hospitals with some hope of respite from additional

admissions, provided new facilities could be designated to act as diagnostic centers.

At the Wayne County General Hospital, by using our existing facilities and staff, we broadened our program to include a rapid, intensive treatment program, which utilized the machinery of Act No. 159, to allow time for obtaining limited therapeutic goals. With such a program we hoped to decrease legal red tape and lessen the stigma usually attached to psychiatric hospitalization. Effort was made especially to spare patients the trauma of commitment hearings and the subsequent court proceedings required for restoring the individual's legal status.

Although this hospital served as a diagnostic center from the time the law went into effect in 1957, our accelerated program did not fully get under way until the fall of 1958.

Facilities

The Wayne County General Hospital is located sixteen miles from the center of Detroit. Expansion of the metropolitan area now places it in the southwestern suburbs, comprising a population of more than 300,000. The hospital has three distinct divisions administered by a general superintendent.

1. *The General Hospital Division*, established in 1933, for the treatment of acute medical and surgical patients. It has since become a well known training center for interns and residents in practically every medical specialty.
2. *The Infirmary Division*, for the treatment of the chronically ill, and the care and housing of the ambulatory indigent.
3. *The Psychiatric Division*, for the care and treatment of adult, psychotic patients.

The Psychiatric Division has 2800 patients at the present time. In addition to the care and treatment of these in-patients, the Psychiatric Division administers an out-patient Mental Health Clinic in downtown Detroit for the treatment of psychoneurotic and ambulatory psychotic patients. Furthermore, facilities are

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provided in Detroit for the follow-up of discharged and convalescent leave patients.

The in-patient professional staff consists of twenty-four physicians, thirty-five psychiatric social workers, sixty-seven registered nurses and fourteen practical nurses. Patients are admitted in acute illness from all sections of Wayne County and, by transfer, from the Receiving Hospital in Detroit.

Admission of Patients

Psychiatric patients are admitted upon legal orders issued by authorized persons designated by statute. To facilitate the admission of emergency patients, there are three types of emergency, or temporary, orders:

1. *Forty-eight-Hour Order*.—This is an order issued by police officers upon authorization of the Prosecuting Attorney's office. It is utilized only when an individual is acutely disturbed and is considered dangerous to himself and/or others. This allows for a two-day period of observation to determine if further hospitalization is necessary.

2. *Five-Day Order*.—This is issued by a Justice of the Peace upon receipt by him of statements from two legally qualified physicians certifying that an individual is mentally ill and needs immediate care and treatment. This gives the hospital five days in which to observe the patient and determine what disposition is to be made. Upon proper certification by the Superintendent, this may be extended by the Probate Court for up to three periods of ten days each.

3. *Probate Court Temporary Detention Order*.—Upon petition by a qualified person asking that an individual be adjudged mentally ill, and if accompanied by the statements of two legally qualified physicians certifying that the individual needs immediate care and treatment, the Probate Court issues an order authorizing the detention of the person for a period of up to sixty days. Within the sixty days a hearing is held in the Probate Court, prior to which the person is examined by two Court-appointed physicians. Upon the testimony presented at the hearing by the petitioner and any or all interested persons, and the reports of the appointed physicians, the Court either adjudges the person mentally ill and commits him to a psychiatric facility for continued care and treatment, or finds him not mentally ill and discharges him from the custody of the hospital, or orders a further limited time of hospitalization at a diagnostic center, for which a diagnostic order is issued (see following).

The other, non-emergency, types of orders authorizing the admission of patients are:

1. *Diagnostic Order*.—This is an order issued by the Probate Court, upon proper petition, authorizing a person to be treated in a diagnostic center for a period of up to sixty days, with a possible extension of another sixty days (see page 42, paragraph 4). While it may be issued without a previous order having been entered, it usually follows the expiration of a Probate Court temporary detention order (see No. 3, preceding).

TABLE I
NUMBER OF PATIENTS ADMITTED AND DISCHARGED
(1954-1959)

Year	Admissions	Discharges	Per Cent Discharged
1954	856	475	55.5
1955	769	423	55.1
1956	788	519	65.8
1957	946	621	65.6
1958	1149	709	61.7
1959	1811	1108	61.1

2. *Probate Court Commitment Order*.—This is an order issued at a hearing, as explained in No. 3 preceding, if it is determined that an individual needs care and treatment for an indefinite period of time. While this order usually follows upon the expiration of a temporary and/or diagnostic order, it may be the first order issued if an individual has not needed emergency care prior to the date set for the hearing of a petition by the Probate Court.

3. *State Order of Transfer*.—This is an order issued by the State Department of Mental Health involving the transfer of fully committed patients between the State hospitals and/or the Wayne County General Hospital.

By appropriate utilization of the various orders, a patient's treatment may be continued, without commitment, for a period of up to 217 days. When recovered, he has only to receive a certificate of capability from his hospital psychiatrist in order to return to work.

Upon admission, after social case study, psychiatric, medical and psychological examinations, the patient's therapeutic program is outlined with certain disposition goals anticipated. Treatment consists of physiological therapy, drug therapy, and individual and group psychotherapy. Early ground privileges (three to seven days), wearing of personal clothing, retaining valuables, when able, and early participation in recreational and occupational activities are a part of the program for each new patient.

Method of Study

For the purposes of this study, we divided the last six years into three periods and charted the patient movement at this hospital, and the Probate Court activities involved, during those periods:

1. 1954-55, years during which the use of tranquilizers had not yet been established.

2. 1956-58, years during which tranquilizers became established as routine treatment.

3. 1959, the year during which our program of accelerated treatment and quick discharge was in full operation.

Table I shows the number of patients admitted and discharged in the years 1954-59 inclusive.

TABLE I-A. BREAKDOWN OF ADMISSIONS BY SEX (1954-1959)

Year	Admissions		
	Male	Female	Total
1954	472	384	856
1955	420	349	769
1956	406	382	788
1957	485	461	946
1958	586	563	1149
1959	887	924	1811

Table I-A shows the breakdown of admissions by sex for the years 1954-59 inclusive.

Table I-B shows the ratio of admissions to discharges, by sex, for the years 1954-1959 inclusive.

Table II shows the percentage of patients, rated clinically committable by psychiatrist, who were actually committed 1956-59.

Table III shows the readmission rates for individuals admitted to this hospital for the first time who

TABLE I-B. RATIO OF ADMISSIONS TO DISCHARGES BY SEX (1954-1959)

Year	Male		Female		Total Number of Discharges
	Discharges	Per Cent of Admissions	Discharges	Per Cent of Admissions	
1954	273	58.8	202	52.7	475
1955	241	57.4	182	52.1	423
1956	293	72.1	226	67.3	519
1957	348	71.8	273	59.2	621
1958	365	62.3	344	61.1	709
1959	533	60.1	575	62.2	1108

returned following their discharge from the hospital. Ordinarily, a person who has previously been hospitalized in any psychiatric facility in the country is considered a readmission; however, in this study, only those who had had previous treatment at this hospital were considered readmissions. Since percentage change for each year is being compared, the validity is maintained. Data for 1955 were not obtained.

Discussion

There are many factors which influence admission and discharge rates. Wanklin and his associates,³ in an analysis of first admissions at a Western Ontario Hospital, found a higher rate of urban residents, and more single, divorced or separated people admitted. Also, the rate of admission for the less educated and the foreign born was higher.

Reviewing our results, we found a steady rise in admissions. This trend has been noted throughout the United States (although the resident populations of hospitals have decreased since the advent of the tranquilizing drugs). Cameron¹ attributed the increase in

admissions encountered at Scottish Mental Hospitals to:

1. Increased accessibility of the hospitals.
2. The dying out of public dislike of, and suspicion of, such hospitals.
3. The widening of medical and public opinion as to the degree of mental unsoundness which necessitates readmission to a mental hospital.

TABLE II. CLINICALLY COMMITTABLE PATIENTS—ACTUALLY COMMITTED (1956-1959)

Year	Commitment Potential	Number Committed	Per Cent Committed
1956	769	257	33.4
1957	933	288	30.9
1958	1140	226	19.8
1959	1811	208	11.5

Two other factors played an important part in the increased admission rate at this hospital:

1. The part of Wayne County outside of the City of Detroit which is served by this hospital is growing rapidly. It functions as a receiving hospital for psychiatric emergencies for this growing population.
2. From October 1958 to the present, more patients have been accepted from the Detroit Receiving Hospital than in several preceding years.

The length of time a patient remains in a psychiatric facility, even on a "voluntary" basis, has been found

TABLE III. READMISSION RATES COMPARED WITH FIRST ADMISSIONS (1954-1959)

Year	New Admissions	Re-admissions	Ratio of Re-admissions to New Admissions (Per Cent)
1954	690	166	24.1
1956	626	162	20.5
1957	770	176	18.6
1958	936	213	18.5
1959	1147	364	20.9

by Storr and Gratnick⁵ to be related to the particular function and philosophy of the institution. Orr and Anderson⁶ found a short length of stay and a limited education to be significant factors in influencing the discharge of female patients.

We found the percentage of discharges for male patients to be quite similar to the discharge percentage for female patients. A higher discharge rate for females is to be expected due to the woman's ready acceptability in the home, whether she contributes in effort or not.

We agree with MacMillan and his co-workers⁷ that, with modern methods of treatment, the patient's stay in the hospital has become shorter. It averages about eighty days for our first admissions. It has also been our finding that keeping the patient in the community, with repeated short-term admissions and discharges on a trial basis as soon as possible, is preferable to a long stay in the hospital, and enables the patient to adjust more quickly and at a higher level. Our experience shows that the accelerated program has resulted in readmissions not significantly higher than those found in 1956 (Table III).

Only in an integrated, community-based mental health service as carried out in Nottingham, England, where more patients are treated in the community by social and out-patient measures, would we expect to see a significant drop in admissions.⁷ Possible candidates for admission were seen by a psychiatric team prior to admission in their program. Such programs have been advocated in this country by Blain⁸; however, the community approach is carried on mainly for neurotic individuals and ambulatory psychotic patients at this time.^{9,10}

The significant change brought about by this program has been the re-evaluation of commitment as a therapeutic tool. The undesirability of commitment as a part of the therapeutic program was discussed by Gottlieb and Tournay¹¹ about the same time that legislative measures were being taken to provide more flexibility for psychiatric facilities in the State. They found definite faults in such a procedure and considered it traumatic to patients and relatives.

Our program has resulted in a reduction of commitments by two-thirds in a four-year period (Table II). More significant is the fact that the number of commitments processed in 1959 in the Probate Court for the entire County of Wayne was reduced by 20 per cent. A large percentage of those requiring commitment are brain-injured or have psychoses of the aging. Some of the patients who remained more than 200 days could just as well have been committed and placed on convalescent leave or trial visit. They would, however, have had to petition the court for restoration of legal status. Many employers would not let patients return to work unless they were restored.

We are well aware of the fact much of this change has been due to the use of tranquilizers. There was a 10 per cent increase in discharges when the use of tranquilizers became prominent. This has later leveled off. We find the change in number of commitments

has been independent of the improved response to medical therapy.

This program has taxed our facilities and personnel to their limit, but we feel the results have merited the effort. We have demonstrated that similar efforts could not only rapidly reduce the need for construction of additional buildings to house patients but, also, return patients more rapidly to gainful employment. Returning patients to their jobs makes them self-sustaining rather than a continuing financial burden. A small investment now in adequately staffed diagnostic and follow-up treatment centers might produce a greater saving later.

Our experience has emphasized the need for adequate community after-care facilities to prevent the return of patients to the hospital. It is estimated that at least one-third to one-half of the returnees could have been kept out of the hospital by adequate follow-up. MacMillan⁷ has found that such community facilities reduce admissions by almost 50 per cent; we are of the opinion that such facilities could do the same to reduce readmissions.

Conclusions

1. The Regional Diagnostic Center Law has been adapted to promote an accelerated, intensive treatment program.
2. Although admissions and discharges have risen, the ratio of returns to this hospital has shown no significant increase.
3. The discharge and re-employment of male patients has been facilitated by rapid treatment without commitment.
4. Commitment of patients admitted to this hospital has been reduced to one out of every ten admissions.
5. This accelerated program has resulted in a 20 per cent reduction in commitments in Wayne County.

Summary

The use of Public Act No. 159, the Regional Diagnostic Center Law, as a tool in the formation of an acute intensive treatment program has been studied. The effect on patient treatment, rehabilitation and commitments has been evaluated.

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Cataract and Glaucoma

An estimated million persons in the United States have a serious eye ailment—glaucoma—without knowing it, and thousands become blind unnecessarily from the ailment every year.

Even more people become blind from cataract, a better known but often neglected, eye ailment. This is also largely preventable.

These facts are underscored in a pamphlet entitled "Cataract and Glaucoma—Hope Through Research" which has just been published by the Public Health Service.

The pamphlet describes these two principal causes of blindness and how the ailments may be arrested or prevented. Research at the National Institute of Neurological Diseases and Blindness at Bethesda, Maryland, and in other medical centers in the United States and abroad is described.

Cataract and glaucoma are separate ailments, the pamphlet points out, and each can be treated by an ophthalmologist. Laymen should not attempt self-diagnosis or self-treatment, the pamphlet warns.

In advanced cataract, the whitened lens can be seen where the black pupil or opening in the colored iris normally

appears. Usually an eye surgeon can remove the chalky lens and restore both reading and distance vision.

In glaucoma, internal eye pressure increases and threatens to strangle the optic nerve and the blood vessels that nourish it. A block in normal eye drainage is the usual cause of such increased pressure.

The pamphlet points out that only by measurement of eye pressure with an instrument called a tonometer can increased pressure be discovered by a physician before symptoms are noticed. A person usually does not become aware of the ailment until vision loss has begun. Even at this point, glaucoma treatment with medicine or surgery usually can control eye pressure and prevent further loss of eyesight.

"Cataract and Glaucoma—Hope Through Research" is listed as Public Health Service Publication No. 793 and Health Information Series No. 99.

Single copies may be obtained without charge from the Public Health Service. Orders under 100 are 15 cents a copy from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. There is a 25 per cent discount on orders of 100 or more going to one address.

Calcium Chloride Necrosis of the Skin

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Detroit, Michigan

A PROBABLE public health hazard in suburbia was brought to our attention by the observation and treatment of the following case.

R.H., a white boy of four and one-half years, when undressed at bedtime by his mother had a painless black patch on the anterior surface of the left thigh. In attempting to determine the cause, Mrs. H. examined the boy's clothing and found the left pocket of his blue jeans wet and discolored. In this pocket, she found a wet paper handkerchief and wet slag. The boy, with his friends, played in or near a slag road recently treated with calcium chloride flakes to reduce the dust. The mother had helped him dress at about 11:00 a.m., using a clean and recently laundered pair of blue jeans and cotton underclothes. The boy was undressed at about 10:30 p.m. The mother was unaware of a previous injury or abrasion of the skin in the involved area.

When the boy was observed at the office (S.C.S.) the next day, the area of dry gangrene was more than 2.5 cm. in diameter on the anterior surface of the left thigh adjacent to the area where the pocket came in contact with the skin. Thirty-two days later, with separation at the edges, most of the necrotic area was excised. After excision, a greenish-grey base with several aggregations of brownish-black punctae was noted. The necrosis obviously extended into the subcutaneous fat. Six days later all of the necrotic tissue had sloughed out. Healing occurred by secondary intention.

Histopathological examination (H. Pinkus, M.D.) of a portion of the necrotic slough revealed mummification or complete necrosis of the epidermis, the entire corium, and even some subcutaneous fat tissue. At the lowest part of the specimen, there was a small amount of living tissue with some reactive inflammatory infiltrate. Hematoxylin and eosin sections stained somewhat bluish. Van Kossa stains were positive. There were definite deposits of silver granules in somewhat spotty fashion on collagen and elastic fibers, not much on the epidermis.

A portion of the excised necrotic tissue was submitted for microincineration. Of this, 587 mg. of dry tissue was ashed and yielded 16.5 mg. of total ash. Of this 5.48 mg. or approximately 33 per cent of the tissue was calcium. Microincineration of three control specimens of skin obtained from post-mortem specimens at Children's Hospital revealed 0.93 per cent calcium in one, 1.02 per cent in another, and 1.96 per cent in the third specimen.

From the Department of Dermatology (Dr. I. Botvinick) and Department of Industrial Medicine and Hygiene (Dr. R. G. Smith), Wayne State University College of Medicine.

Our case was comparable with the case of Nash.¹ His patient, a twenty-nine-year-old Turkish laborer, developed thick black eschars surrounded by a thin border of inflammation within twenty-four hours after



Fig. 1. Area of necrosis approximately two weeks after exposure.

he splashed his trousers with a 40 per cent solution of calcium chloride he was making up for use as an anti-freeze. The ulcers were preceded by pain and occurred where the tops of his gum boots had rubbed.

We could not obtain a reliable history of pain preceding the onset of the necrosis nor could we obtain a history of preceding trauma. It is possible that penetration of the skin by the calcium chloride was aided by the presence of another compound on the slag. We have been unable to solve this problem.

Oppenheim's patient² developed papules and small nodules at the area of contact with a concentrated calcium chloride solution. Heppleston³ described ulcers and non-ulcerated papules in a worker due to contact with 40 per cent calcium chloride solution used as a dust laying spray in a coal mine. Edmonds⁴ re-

ported punched out ulcers of the knuckles, follicular excoriated dermatitis with erythema on the flexor surfaces of the wrists and neck and excoriated dermatitis of the front of the ankles and shins in coal miners exposed to mine water with 51,900 PPM CaCl_2 , 10,200 PPM MgCl_2 , and 129,500 PPM NaCl . Zackheim and Pinkus⁵ described two cases of necrosis of the superficial corium due to surface contact with dry calcium chloride. Snedden and Archibald⁶ described calcification of the skin in coal miners due to contact with roof water of a coal mine which contained 3.5 per cent calcium chloride, 0.5 per cent magnesium chloride and 10 per cent sodium chloride. An apparent Koebner phenomenon was observed. They reproduced the lesion experimentally by applying a similar solution to the scarified skin.

Summary

Necrosis of the skin of the thigh on a boy of four and one-half years due to exposure to calcium chloride used in controlling dust on a slag road is presented.

A history of previous injury of the skin could not be obtained.

Acknowledgment

Control specimens were obtained through the cooperation of Dr. Jay Bernstein of the Children's Hospital of Michigan.

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Drinking Drivers

A health specialist at the University of Michigan urges a "get tough" policy to counteract the flood of traffic deaths and injuries caused by drinking drivers.

Seward E. Miller, M.D., says, "We can begin by finding a better word than 'accident.' An 'accident' implies the event is out of the hands of the driver. But drunk driving is entirely the personal responsibility of the driver, and he should be held firmly accountable for his acts."

In the May-June issue of "Police" magazine Dr. Miller recommends four steps in cracking down on drinking drivers: He proposes a strong campaign to declare drunken driving a serious crime against the public safety, correction of laws

so that drunken driving be judged on the basis of modern scientific knowledge, adoption of new laws to provide severe penalties for drunken driving, and rigid enforcement and staunch public support of the police agencies and an end to popular molly-coddling of drunks.

Dr. Miller points out that present laws consider an individual "under the influence" only when his blood alcohol test is above 0.15. Modern scientific knowledge shows driving ability is impaired at about 0.04 per cent alcohol in the blood. "In about 50 per cent of fatal auto accidents a drinking driver is involved. If we had such clearcut evidence about the cause of cancer, there would be a booming public outcry to put an end to it."

Public Health---Present and Future

Malcolm H. Merrill, M.D., M.P.H.

Berkeley, California

SOME YEARS AGO, I chanced upon a magazine article entitled "No Age is Golden." It pointed out that each generation throughout history had considered its problems as new, unique, and more critical than any that had gone before. Yet, with passage of time, posterity tends to look back upon the "good old days" as having been more desirable than their own period, and they even think of some of these earlier troubled eras as "golden ages."

Surrounding us today are alarmists who once again would have us believe that our times are the most critical in all of history. I happen to be of an optimistic turn of mind. This doesn't keep me from recognizing that we have many and important issues which demand solution, and it reminds me that we have more resources for facing these issues than man has possessed at any other time in history.

Political and social organizations are better organized to attack international problems than ever before in history. The United Nations Organization has repeatedly demonstrated its effectiveness in the solution of critical problems. This is a new instrumentality, a new resource that our generation possesses. In our field of health, the World Health Organization, an agency of the United Nations, is a rallying point for a world-wide attack on disease and disability.

Going hand in hand with these official governmental agencies is an expanding international voluntary association effort. The emergence of a World Medical Association and a whole series of international specialty groups, with associated congresses and conferences for the exchange of scientific information, are all making significant contributions to the solution of problems in the field of health. And along with these organizational resources we have the greatest fund of scientific knowledge and scientific competence to apply this knowledge that man has ever possessed.

These generalities are mentioned as a prelude to consideration of some more specific matters in the

health field about which physicians are now concerned and will be increasingly concerned in the future.

Truly, we are living in a changing world. It has always been changing, but the rate of change is greater than ever before. Just as these changes are influencing every other phase of life, they are also influencing medicine and public expectation of health services.

Here, I shall try to sketch some of these trends and the changes that are having or may be expected to have an influence upon the health of the people of our country; and what is being done and what we should consider doing about them. I shall not attempt to relate these changes to the world-wide picture.

Let us begin by considering some of the social and environmental changes that we who have an interest in health must take into consideration in planning for the future.

Population To Be Served

Since, as physicians, we are concerned with people, one of our basic considerations must be how many and what kind of people are to be served.

The 1960 census records 180 million people in the United States. This is estimated to increase to 235 million by 1975, an increase of some 55 million. The greatest increase will occur at the two ends of the age spectrum; the under-twenty-one will comprise 114 million, as compared with 65 million in 1955. This group will comprise 40 per cent of the total population as contrasted with 29 per cent in 1955.

The number of people sixty-five years and older is estimated to expand from 15 million in 1955 to roughly 21 million in 1975. It should be particularly

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Presented at the Annual Session of the Michigan State Medical Society, Detroit, Michigan, September, 1960.

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noted that, while the number will increase by over one-third, the actual per cent increase in terms of the total population is less than 1 per cent—contrasted with the 11 per cent increase in the under 21 age group. This fact is frequently not considered by the alarmists. Our nation is actually getting younger faster than it is getting older.

The average life expectancy is slowly increasing. At birth it stood at 59.7 in 1930, 62.9 in 1940, 68.2 in 1950, and close to 69 in 1960.

Unless there are very significant break-throughs in the fields of major causes of death, we can hardly expect in the next decade any remarkable changes in average life expectancy.

Life expectancy at the age of sixty has undergone surprisingly little change since the turn of the century. The average remaining lifetime at age sixty for white males has increased only one and one-half years, and for white females, only about four years since 1900.

The implications of these population changes are far-reaching. The greatest increase in the demand for medical services will be in the fields of obstetrics, pediatrics, and geriatrics. In terms of percentage distribution by category of all medical services, there will be a relative percentage increase in these three areas.

What are the implications in terms of medical and paramedical manpower needs? In order to maintain the present physician-population ratio of 140 per 100,000 population, it will require 330,000 physicians by 1975. This will necessitate the annual graduation of 11,000 medical students—an increase of approximately 3,600 over the number of 1959 graduates. This will require thirty-six new medical schools, each graduating 100 students a year.

The figures for physicians are used here simply as an illustration, because the situation is the same with respect to dentists, nurses, and all paramedical personnel.

It is the impact of such estimates as these that is causing so much interest on the part of federal agencies, the Congress, and many state governments in meeting the medical manpower needs of the future.

The implications from the standpoint of medical facilities are equally impressive. Using the present estimates of 10.5 beds per 1,000 population as hospital requirements, there will need to be added more than 300,000 hospital beds in the country by 1975, and at a cost of over nine billion dollars. This is without reference to modernization and replacement of obsolescent facilities.

In the broad areas of providing manpower and facilities to meet the health needs of the people of America, medical statesmanship is needed to team with government and voluntary effort to solve the problem. There are encouraging signs that this will be done. In my own state of California, during the past year an extensive study under the aegis of the Governor has been entered into vigorously by medical, hospital, and other associations in co-operation with the state government to define the respective problems and to delineate approaches to their solution. The same has been happening in New York and in other states.

At the federal level, extensive studies have been undertaken to define the problem nationally and to determine the role of the federal government in its solution.

Changing Patterns of Morbidity and Mortality

All the above considerations are primarily related to the number and age distribution of the population. Let us now turn to a second general consideration—the changing patterns of cause of morbidity and mortality. The great plagues of history are no longer with us in this country. The major communicable diseases play a relatively minor role now as direct causes of mortality. Smallpox is a rarity; diphtheria, while still much more frequent than is necessary, is of minor significance as a cause of death; typhoid fever is an infrequent occurrence; tuberculosis no longer appears among the ten leading causes of death; syphilis and its multifarious complications is within reach of eradication; malaria is essentially controlled. With these diseases, the major problems of the future will be the maintenance of control. These and many other accomplishments are monuments to medical and sanitary science.

Nevertheless, even the communicable and infectious diseases are far from controlled. There is a vast array of viral diseases yet to be conquered. The respiratory virus diseases alone represent perhaps the most frequent current cause of morbidity and the most frequent cause of loss of work time. Encouraging beginnings are being made in the way of more clearly defining the etiology of the virus diseases and in approaching prevention through specific prophylaxis. With the diminishing incidence of poliomyelitis there is being revealed a whole constellation of enteric viruses that are actually or potentially pathogenic.

Antibiotic-resistant bacterial infections occurring in hospitals and the community are rising to plague us.

All of this means that to maintain our gains and

push forward to further accomplishment, eternal vigilance, and intensive and extensive research will continue to be necessary in the field of communicable and infectious disease control.

With the diminishing over-all importance of communicable diseases, however, it is the chronic diseases—cardiovascular disease, cancer, diabetes, arthritis, asthma, and a host of others—that are looming ever larger as our health problems. Associated with these is the rising importance of accidents as a major cause of death and disability. Accidents now stand in first place as cause of death between the ages of one and thirty. For every death there are at least twenty injuries severe enough to cause hospitalization.

Concomitant with these changes in the morbidity and mortality picture is a significant shift in emphasis in medical practice. Pediatrics is increasingly a health maintenance and disease prevention practice. Obstetrics is increasingly so, too. In fact, every physician is, to an ever increasing degree, practicing preventive as well as curative medicine. Early detection of disease and active therapy while still in the asymptomatic stage is gaining as a routine part of medical practice.

A still further significant trend is the increasing emphasis being given to rehabilitation. Physicians are now and will in the future to an increasing degree be concerned with the total rehabilitation of the patient, including emotional, social, and occupational as well as physical rehabilitation. The team approach involving physician, nurse, social worker, psychologist, homemaker, and other disciplines is gaining in importance. Chronic disease hospitals and nursing homes are changing from places for custodial care to centers for active therapy designed to effect maximum rehabilitation. Rehabilitation centers, either as such or in association with general hospitals, are becoming an important facet of the total medical resources of the community. Since this area of medical care is so intimately related to community resources and services, it would seem inevitable that health departments will become increasingly involved as a member of the team.

Implications of Environmental Changes

May we turn now to a third general area of changes which have health implications. These are the extensive changes in the physical environment. The chemical, technological, jet, and atomic age has brought many new threats to health as well as actual and potential resources for the promotion of improved health.

Chemicals.—Chemicals are becoming increasingly important as a health hazard in the physical environment. Between 400 and 500 entirely new chemicals are being put into use each year, and new waste by-products incident to their manufacture and use must be disposed of. These new chemicals include plastics, food and fuel additives, pesticides, detergents, and abrasives.

All the chemicals in use are checked for toxicity, but the long-term potential hazards of many of them, their possible cumulative and synergistic effects, are still largely unknown. Increasingly, toxic chemicals can reach the people through air, food, and water.

Air Pollution.—Air pollution is another increasingly important health hazard of the physical environment. The air we breathe is becoming a limited resource, something never dreamed possible a few years ago. Pollution is increasing from chemicals, smoke, dusts, and radioactive fallout. The simultaneous presence in the air of various chemical substances can multiply the toxic effects of some. California-type smog is produced by reactions taking place in the air between very low concentrations of hydrocarbons and nitrogen oxides with atmospheric oxygen in the presence of sunlight. The simultaneous presence in the air of these substances, which individually in low concentrations are apparently harmless, produces oxidants that are irritating to the eyes and mucous membranes and damage or destroy certain plants. The full extent of the effects of air pollution on health is not known. Chronic bronchitis is increasing in some areas and there is increasing evidence that the rate of occurrence is related to air pollution. Evidence is mounting that lung cancer and emphysema may be related to air pollution. Extensive studies in this field in the years ahead will be necessary, and intensification of control and preventive measures is imperative.

Water Pollution.—With the tremendous population growth and concentration in cities, demands on the limited water supplies are creating health hazards. Water needs are expected to double in the coming decade. Heavier demands are placed on sewage treatment facilities and water purification plants. Already in the flow of a river to the sea, its water may be used and re-used many times. Water resource planning, storage, impoundment, treatment, and control of chemical content take high priority today. Man's struggle to keep ahead of his wastes is becoming more difficult now that there is not only sewage and

garbage to dispose of, but increasingly complex radioactive and chemical wastes in huge quantities. Disposal of radioactive wastes is a particularly difficult and urgent problem, and a sensitive one, too.

Radiation.—The growing use of nuclear energy, with the attendant increase of radiation in the physical environment, forces the health hazards of radiation to our attention. Even if the dangers of radiation from atomic and hydrogen bomb fallout are ignored, the increasing use of nuclear energy in industry, the use of radio-isotopes, the much more widespread use of radiation in medical diagnosis, and the increased number of other sources of radiation present serious potential public health problems that are here now and will increase during the years ahead. Physicians have a long experience in the successful beneficial use of x-ray, and this will be invaluable in helping to establish standards for wider use of radiation.

The great benefits of x-ray as a diagnostic procedure have brought about a tremendous increase in its use over the years and in its availability to ever larger segments of our population. As a result, medical uses of radiation contribute 50 per cent or more of the present radiation dose of the entire population, as compared with 1 per cent or less from radioactive fallout or wastes. At present, medical uses contribute a dose equal to, or slightly larger than, the dose from natural background sources.

Man has always lived with natural radiation, and this source is fairly constant. We cannot do anything to lessen the natural background radiation, but the obvious place to reduce radiation exposure without changing our way of living is to decrease the dose from medical use.

The wide experience of physicians with x-ray has already enabled the medical profession to develop and establish standards for reducing the dose of radiation to patients without interfering with its diagnostic value. Competent authorities in the field of medical radiation have stated that the dose to the patient population of this country can be decreased to 10 or 20 per cent of the present level without in any way limiting any necessary examinations.

These standards that have been set pertain to safe and efficient equipment, skilled technique, and careful consideration of the clinical indication for the use of x-ray procedure. If the medical profession can bring about even a slight decrease in the radiation dose from medical procedures, this can completely offset the dose the population now receives from radioactive

fallout, nuclear industry, and radioactive waste disposal. As physicians we have a serious responsibility here.

It is urgent that much more be learned about the long term effects of low-level radiation and, in the meantime, we must keep the radiation dose from man-made sources as low as is practicable and desirable. Control measures will need to be extended. The last session of the California Legislature took a step in this direction by passing laws which establish a mechanism for co-ordinating state control programs and which require every source of radiation in the state to be registered with the State Department of Public Health, including medical, dental, industrial, and scientific sources. Most states have either adopted or have under consideration comparable laws.

But in the concern over the possible health hazards of radiation, sight should not be lost of the tremendous potential benefits for health and welfare presented by this newly discovered source of energy.

Other Physical Factors.—Temperature, pressure, sound, light, and speed are other factors of the physical environment that have pronounced effect on health, particularly occupational health. Many workers today are subject to extremes of these factors to the detriment of their health. The partial deafening of men who work around the roar of jet planes is one example. Every large airport now brings public attention to the problem of the effect on people of noise from jet planes.

Social Environment.—In medicine it is being realized, perhaps more than ever before, that changes in the social environment also have health implications. A mere listing of some of the changes in the social environment that are recognized now and that may be expected to continue, suggest that some of these will be favorable to health, while others will intensify physical and biological hazards to health, or create social health hazards.

A mere listing of a few of these changes will serve to indicate the health implications:

Increasing urbanization and the creation of great metropolitan complexes with three-fourths or more of Americans living in metropolitan areas; increasing mobility of the population, both geographically and socially; changing patterns of living; an increasing number and proportion of older people in the population with all the problems this presents; speed of transportation and increased tempo of living with resulting increased stress and tension; higher living standards; shorter work periods; increased leisure time; more recreation opportunities; better nutrition; and better housing.

The protection of the nutritive value and of the safety of the food supply may be cited as one example of the health implications of these changes. Food sanitation, refrigeration, and pasteurization of milk have been great advances in health protection, but modern methods of growing and processing foods have brought new hazards from preservatives and other food additives, contaminants related to packaging, and residuals from agricultural chemicals. The "cranberry scare" is still vivid in our memories as an example of chemical residues in food. Since then, amendments to state and federal pure food laws have been passed to further safeguard public health. But here, as with radiation, the present and potential benefits of the many new chemicals must not be ignored. Their use has not only helped to keep under control many diseases carried by insect and rodent vectors, but has already increased the food supply many times over. Agricultural chemicals have been an important factor in keeping the food supply in this country far ahead of the demands incident to the tremendous population growth.

Famine and actual starvation are almost unknown in this part of the world, and nutrition has been greatly improved; but, ironically, obesity is now a health problem.

Today's complex social structure compounds the hazards to emotional health. *Mental illness* in its various manifestations becomes increasingly the concern of physicians and public health.

Almost one-half of the hospital facilities of our country are devoted to the care of the mentally ill. These, for the most part, are large isolated institutions. More and more mental patients in the future will receive care near home in community general hospitals. There is a remarkable upsurge of attention being given to this important problem. Intensification of therapeutic measures applied to the mentally ill with broad spectrum approach to rehabilitation, expanding research endeavours, and sharpened attention to preventive measures will characterize the attack on this extensive problem in the coming years. Already community mental health programs are being developed in many areas of the country under medical leadership. As with rehabilitation in general, broad community resources will increasingly be applied in this area. More attention will be given to assisting the patient in readjusting to normal living and to home care services.

Inadequate housing and economic stress create social as well as physical health problems. Crowding into

cities has magnified these problems. Attempts to better the housing situation by slum clearance has brought its own emotional problems through separation from friends and neighbors, disruption of community services and facilities, and economic burdens from higher rents.

The health implications of migration must be considered. The agricultural migrant laborers and all their associated social and health problems come within the purview of the planning for health.

While the social environment creates many health problems and aggravates others, it must be borne in mind that it also provides the means of solution, through favorably influencing human behavior.

In public health and medicine it will be necessary to become more seriously concerned with planned change, induced change, in people's behavior. The success of public health and increasingly of all medical programs depends to a great extent on persuading a majority of people in a given area to co-operate in health measures, to change certain habits, to give up old practices, to adopt new ones.

Understanding of human behavior will have to be recognized as basic to effective public health and medical programs. It will be necessary to promote social science research related to health, and to learn to apply the results in public health work.

Economics of Health Services

Problems surrounding the economics of health services is a fourth general area of change that is occupying much of the time and attention of the medical profession and increasingly of legislative bodies and many segments of the populace at large. The age of prepaid medical services is here and will inevitably play an increasing part in the economics of medical services. The central issue being debated at the present time, and which will probably be decided during the coming decade, is the role that government is to play in this area.

Medical Research

A fifth area of change in which medicine has a great interest is the emphasis being given to medical research. It is estimated that in 1947, 88 million dollars was expended in this country on medical research and development. This had increased to 330 million in 1957, probably exceeded 500 million in 1960, and further expansion appears most probable. An increasing proportion of medical manpower will be devoted to such research and development. How to

apply this increasing fund of new medical and scientific knowledge in an economical and productive way will itself present significant problems.

Consumers of Medical Services

A final area of change which I should like to mention pertains to the consumers of medical services. The public knowledge of medicine is increasing; the mysteries are being swept away. With this has come increasing expectation of what the wonders of medicine can do. It appears the public has placed a sufficiently high priority on medicine that there is a willingness to expend a relatively greater proportion of the gross national income for health services. This public sentiment should be taken into consideration in planning for the future.

Summary

This brief sketch is one public health administrator's

attempt to delineate some of the major areas that will be of concern to medicine and public health in the years ahead. Since public health is the specialty in medicine that represents physicians in the health field in government, it is imperative that there be a firm and effective co-operative relationship between the specialty of public health and the rest of the medical profession. The age of planning for the future is here. We, in the medical profession should be as one in the forefront of this planning. We must work together in planning for the needed health manpower, for needed health facilities, for stimulation and planning of research; in planning for the application of scientific knowledge as fast as it becomes available, in planning for the protection of the physical and social environment so the people of America will have a healthful place in which to live, and in planning the mechanism by which all of these services may be financed on a sound and economical basis.

Phenylketonuria

In Michigan, four infants, genetically destined to be mentally retarded, have been assured normal intelligence and healthy growth. The four are heirs to phenylketonuria (PKU).

They were rescued by the Michigan "Program for Mentally Retarded Children," centered at The University of Michigan Medical Center, and its intensive state-wide campaign to predict and prevent mental disease.

According to Richard J. Allen, M.D., U-M pediatric neurologist and director of the program, the groundwork for saving the four children was laid less than three years ago when the program initiated a continuing survey of Michigan's mentally ill. The study revealed about 100 cases of clearly-defined PKU among the number of other mental diseases that beset Michigan.

PKU is an inherited disorder, and so physicians, psychologists and social workers from across the state interviewed and examined all family members of the victims uncovered by the survey. Special interest focused on newly pregnant mothers

within the families. On delivery at various hospitals throughout the state, the babies were tested with special blood tests.

The four found to have PKU were diagnosed within days after birth and immediately placed on a special corrective diet. Dr. Allen says, "These four children will presumably grow to normal, intelligent adulthood. If they had gone untreated longer than six months, some degree of abnormality probably would have resulted."

The Central Registry of all known PKU victims is located at the U-M Medical Center. The Michigan Program is aided by the Children's Bureau of the Department of Health, Education and Welfare.

Dr. Allen said it is believed to be one of the first state-wide efforts of its kind to combat this type of mental illness. He predicts that in the near future, when all physicians in the state are acquainted with the disease and perform the necessary early and accurate diagnosis, PKU will be controlled.

SPECIAL ANNUAL EDITION
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THE CASE OF "THE BLURRED IMAGE"

G. THOMAS MCKEAN, PRESIDENT
MICHIGAN MEDICAL SERVICE
READING TIME: 3 MINUTES, 15 SECONDS

The masthead on the cover of this Blue Shield Section should be very familiar to all in Michigan Medicine. It is, of course, the masthead of the monthly *Blue Shield Record*. The *Record* has become the prime instrument for communicating regular monthly information about prepayment and Blue Shield activity to Michigan's medical profession.

Thus it serves as the symbol of this special section of the June issue of the MSMS Journal devoted to capsuling a year of activities and developments within Blue Shield itself.

Out of the past year's activities in Medicine and in medical prepayment have emerged several inescapable facts:

1. The general public's images of the doctor and of the prepayment programs like Blue Shield have become blurred.
2. The images must be cleared and the record set straight. The interrelation of the public, Blue Shield and the individual doctor is the general theme of this special Blue Shield section this year.

Varying articles in it express perhaps widely divergent views in detail, but the thread is clear: the only finally effective public relations for the medical profession—whether it concerns Medicine's image or Blue Shield's—is the grassroots contact between doctor and patient on the individual level. In a word, "Mirror, mirror on the wall, who is fairest of them all?"

Only each doctor individually can answer that question about Medicine and Blue Shield for each of his patients.

Knowledge, sincere goodwill and dedication: these have been and always will be the doctor's basic tools in both his medical and socio-economic relationships with his patients. These can be utilized effectively only on a personal, doctor-patient basis.

Some of us—perhaps a substantial number of us in the profession—have tended to delegate this basic personal relationship with many of our patients to public relations technicians in our perfectly normal determination to utilize our time to choose and use the enormous range of clinical weapons at our disposal. Amidst clinical plenty we must improve, or in some cases re-establish a personalized doctor-patient relationship which has been sacrificed, albeit unintentionally, to clinical efficiency.

A perusal of the public press, popular magazines and some of the rather numerous Blue Cross and Blue Shield rate hearings around the country makes it quite evident a substantial number of people and a substantial number of articulate groups have serious misconceptions about both organized medicine and medically-oriented prepayment like Blue Shield.

The problem is that fact is not absolute; it is relative and it is emotional. The fact that, in general, doctor's fees are fair and reasonable and that "abuse" and misuse of prepayment programs are greatly overrated by the public and many articulate groups doesn't solve the problem.

The damaging "fact" is that these people believe only what they want to believe. The public tends to believe that doctor fees are too high and that abuse is widespread in Blue Shield.

In short, truth is not absolute. Truth, practically speaking, is what people believe is true. So whether we like it or not, we in the medical profession must accept the fact that an important number of persons believe that doctors overcharge and that Blue Shield is abused both by other members and by the doctors.

I think once we understand that even though people really recognize that today's medical care costs more, they don't really *like* to pay it and thus are subconsciously eager to find a scapegoat, then I think we as doctors can get out of a subjective atmosphere of our own and approach the problem objectively.

Once we achieve this objectivity, it is comparatively easy to recognize that in such an emotional atmosphere, "one bad apple" can spoil the whole barrel. We must:

1. Be sure individually that we do not ever "take advantage" of the Blue Shield program.

2. Recognize that controls and checks on use instituted by Blue Shield are necessary to prevent even the "one bad apple." Our program must also convey to the general public that there are effective controls against possible abuse and that the profession subscribes to them and supports them.

This, I feel very strongly, is a positive approach. It requires that we close ranks. Every physician as an individual should prove by example what is true about medicine and prepayment. Only this way, I am convinced, can we change the concept of truth about medicine and prepayment to what it ought to be in the general mind of the public.

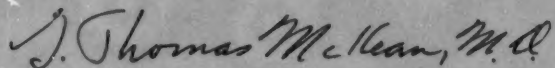
In the specific realm of Blue Shield, we can work for ever greater inter-communication between Blue Shield, the doctor and our subscribers.

But we in Blue Shield can go no further than to suggest and to furnish the tools of knowledge about Blue Shield to the doctors.

We can work no public relations miracle. We *can and must* educate the subscriber to his benefits and their value. We *can* furnish the medical profession with the facts about Blue Shield. It then rests with the profession—collectively, but more important, individually—to use all the tools wisely.

Then Blue Shield, with the cooperation of the profession itself recognizing the need for effective self-discipline, will embody a positive program which will establish with the public the true dimension of prepaid medical care.

I believe the balance of this report will help lend depth and perspective to the problems we face. I believe the basic job is to establish as "public fact" what we in medicine believe to be "true fact." What is that? Namely that properly disciplined and intelligently receptive to change, the American system of "free-choice" medical practice and a voluntary prepayment system for financing medical care costs is the only way we shall continue to provide the best and most dynamic medical care to the American people. Failure to live up to that and to warrant public acceptance can only lead to another kind of medicine—in our time. To allow this to happen would be a disservice to both the medical profession and the public.



G. Thomas McKean, M.D., President
Michigan Medical Service

ENROLLMENT HOLDS STEADY IN 1960

READING TIME: 1 MINUTE, 15 SECONDS

Before analyzing briefly the Michigan Blue Shield enrollment figures for 1960 detailed on the next two pages, let us again point out that a distinguishing characteristic of Blue Shield is the basic principle of social responsibility it embodies in its method of "Community Rating."

The aim, of course, is to try to meet equitably the health care needs of the entire community. Thus Blue Shield sets its subscription rate on the overall average for all groups it enrolls. This becomes a "community" average including big groups and small groups; those with "good" experience (i.e., low claim rate) and those with "bad" experience (i.e., high claim rate).

This philosophy, competing with commercial "experience-rating" principles of setting individual rates for individual groups, means we at times "lose" groups already enrolled. But in the long run, as the figures indicate, Blue Shield enrollment stays on an even keel. Both major industry and labor have subscribed for many years to the social wisdom and long-run economic advantage to the community of community-rating.

Practically speaking, Blue Shield enrollment held steady last year. You will note that the total Michigan enrollment actually underwritten under MMS contracts was 3,449,650. However, an additional 82,000 are underwritten through other Blue Shield Plans—principally some of the "Steel" groups and more than 68,672 federal employees.

Actually most of these federal workers, before the July 1960 national uniform contract went into effect, were enrolled in the Michigan plan and were included in the Michigan figure for the previous year which stood at 3,518,322. Practically speaking, these groups serviced by MMS should be included in any figure totaling Blue Shield coverage in Michigan. As you will note, when this is done, the total Blue Shield coverage figure as of January 1, 1961 was 3,531,151 which is 12,000 higher than for that date in 1960.

Also of particular interest is the fact that 85% of all Michigan Blue Shield enrollment is under the M-75 group contributory certificates. Moreover, of the nearly 3,000,000 thus covered, over 50% (50.89%) are in Plan "C", the \$5,000 to \$7,499 income ceiling with the highest fee schedule. Some 15% are in Plan "D" (\$7,500 and over) while only 8.24% (mostly group retirees) are in Plan "A" (under \$2,500). The remaining 25.88% are in Plan "B" whose income range is \$2,500 to \$4,999.

MICHIGAN BLUE SHIELD ENROLLMENT

M-75 GROUP

CONTRACTS

MEMBERS

M-75 Group

Plan A	123,622	240,242
Plan B	295,842	754,595
Plan C	457,409	1,484,027
Plan D	123,075	437,004
Sub-total	999,948	2,915,868

M-75 Group Deductible

Plan A	61	99
Plan B	388	1,047
Plan C	303	1,038
Plan D	171	583
Sub-total	923	2,767

Pending (Group Rates & Benefits)	8,160	23,590
Sponsor Dependent Rider		6,974
Family Continuation Rider		3,385
Total M-75 Group	1,009,031	2,952,584

M-75 GROUP CONVERSION

M-75 Group Conversion

Plan A	72,987	110,771
Plan B	38,858	90,889
Plan C	14,110	40,181
Plan D	5,148	14,797
Sub-total	131,103	256,638

M-75 Deductible Group Conversion

Plan A	2,482	4,512
Plan B	1,978	5,423
Plan C	857	2,734
Plan D	417	1,281

Sub-total	5,734	13,950
Sponsor Dependent Rider		67
TOTAL M-75 Group Conversion	136,837	270,655

M-75 NON-GROUP		CONTRACTS	MEMBERS
M-75 (Under Age 65)			
Plan A		52,268	87,423
Plan B		25,384	58,811
Plan C		8,895	26,132
Plan D		5,065	14,325
	Sub-total	91,612	186,691
M-75 (Senior)			
Plan A only		15,317	15,317
Total M-75 Non-Group		106,929	202,008
TOTAL M-75		1,252,797	3,425,247
\$2,500 GROUP			
Surgical		2,676	5,981
Medical-Surgical		1,894	5,302
	Sub-total	4,570	11,283
\$5,000 GROUP			
Surgical		932	3,174
Medical-Surgical		3,292	9,770
	Sub-total	4,224	12,944
Pending (Group Rates & Benefits)		64	176
TOTAL \$2,500-\$5,000		8,858	24,403
TOTAL MICHIGAN BLUE SHIELD ENROLLMENT		1,261,655	3,449,650
Additional Enrollment			
Serviced by MMS			
Federal Employees		21,260	63,511
Others		5,161	17,990
GRAND TOTAL		1,288,076	3,531,151

**MORE MEMBERS NEED
AND GET
MORE SERVICES**

READING TIME: 1 MINUTE, 5 SECONDS

The two tables on the opposite page tell what's happening in the field of medical care—both as to the increase in the number of services per 1,000 persons and in the pattern of increased cost in prepayment.

Remember that the *fees* for the services paid by Blue Shield *remain the same*. It is the need for more services by members that increases the *cost*, and thus periodically, the Blue Shield subscription rate.

Notice that the tables break the services provided by Michigan Blue Shield into 10 major components. They provide a comparison of the 1st nine-month period of 1959 with the 1st nine-month period of 1960.

The tables first compare the *number of services per 1,000 members* and the increase. As you will note, it shows the percent of increase for each of the 10 services over the previous period and an average overall increase of services per 1,000 members of 12.14%. There is a final column labeled "weight" of increase. It shows the degree—based on a total of 100%—which each component's increase actually contributed to the over-all increase figure of 12.14%.

In short, take anesthesia. It had an individual increase of 11.75% of 1960 over 1959. But its frequency in relation to all other components was low and its 11.75 increase only represented 4.31% of the 100% value of the total increase.

On the other hand, "surgery" with a high frequency in relation to other components, had only a 7.04 percent increase individually, but this accounted for 18.91% of the 100% value of the total increase.

The second table compares the *cost of services and administrative expense* and the increase. It involves the same 10 services over the same comparative periods. Note that because the highest increases in *services* occurred in *lower-cost* components, that the overall increase in *cost-per-1,000 members* is 6.37 percent although the *frequency* of services increased 12.14 percent.

Again, the pattern of the tables is identical, with the last column showing the degree—based on a total of 100%—which each component's increase actually contributed to the over-all increase figure of 6.37% in *cost*.

MICHIGAN MEDICAL SERVICE

FREQUENCY OF SERVICE UNDER THE M-75 CONTRIBUTORY SERIES GROUP AND GROUP CONVERSION CONTRACTS COMPARISON OF INCURRED 1st 9 MONTHS OF 1959 AND 1st 9 MONTHS OF 1960

Component	Frequency of Service Per 1000 Members Per Year 1959	1960	Increase (Number)	Percent of Increase Over 1959	Weight (Percent of Total Increase)
Surgery	219.73	235.21	15.48	7.04%	18.91%
Obstetrical	21.66	22.42	.76	3.51	.93
Medical	68.82	72.79	3.97	5.77	4.85
Anesthesia	30.03	33.56	3.53	11.75	4.31
Diagnostic X-Ray	268.10	303.39	35.29	13.16	43.09
Radiation Therapy	2.12	2.68	.56	26.41	.68
EKG-BMR-EEG	47.27	59.55	12.28	25.98	15.00
Pathology	7.00	12.03	5.03	71.86	6.14
Consultation	7.88	11.19	3.31	42.01	4.04
Technical Surgical Assistance	2.00	3.68	1.68	84.00	2.05
Total	674.61	756.50	81.89	12.14%	100.00%

MICHIGAN MEDICAL SERVICE

COST OF SERVICES AND ADMINISTRATION EXPENSE M-75 CONTRIBUTORY SERIES GROUP AND GROUP CONVERSION CONTRACTS COMPARISON OF INCURRED 1st 9 MONTHS OF 1959 AND 1st 9 MONTHS OF 1960

Component	Cost of Service Per 1000 Members Per Year 1959	1960	Increase (Amount)	Percent of Increase Over 1959	Weight (Percent of Total Increase)
Surgery	\$10,666	\$11,023	\$ 357	3.35%	23.83%
Obstetrical	1,968	2,000	32	1.63	2.13
Medical	4,420	4,507	87	1.97	5.81
Anesthesia	907	997	90	9.92	6.01
Diagnostic X-Ray	3,249	3,657	408	12.56	27.24
Radiation Therapy	181	228	47	25.97	3.14
EKG-BMR-EEG	459	573	114	24.84	7.61
Pathology	40	60	20	50.00	1.34
Consultation	78	130	52	66.67	3.47
Technical Surgical Assistance	55	91	36	65.45	2.40
Total	22,023	23,266	1243	5.64	82.98
Administration	1,490	1,745	255	17.11	17.02
Grand Total	\$23,513	\$25,011	1498	6.37%	100.00%

**UTILIZATION CONTROLS:
PAST, PRESENT
AND FUTURE**

READING TIME: 3 MINUTES, 25 SECONDS

At the time Michigan Medical Service filed for a 19.5% rate increase in May of 1960 to hold for a two-year period, the Commissioner of Insurance slashed the amount to 11.5%. He frankly stated in his ruling and directive that the 11.5% was estimated to last only one year and allowed no provision for rebuilding a non-existent Contingency Reserve.

To explain his action, he declared that "many of our citizens hold to the opinion that prepayment plans have been abused in such areas as . . . payments by Blue Shield for services not rendered and excessive use of diagnostic services.

"We are not in a position to determine the extent and relative importance that should be assessed to these factors," the Commissioner said, "but careful review of these, as well as other areas, should be undertaken and procedures established to prevent misuse or abuse." This should involve a program, he said to "minimize rising costs to subscribers and provide a more stable rate and benefits structure."

Two points about this are crystal-clear: the general public believes there is considerable "abuse" yet not even the Commissioner feels he is in a position to measure and declare its extent.

The facts, very briefly, are these: Michigan Medical Service for many years before this directive has utilized several effective deterrents to so-called misuse. So has companion Michigan Hospital Service in the area of misuse of hospital care benefits.

In addition, since May of 1960, old measures have been strengthened, new ones instituted and a constant broadening of these programs is envisioned in the future. Such programs are not designed as punitive action on the medical profession as a whole, but a safeguard against the occasional offender whose action can taint the vast majority who do not misuse the program.

Such programs are actually to the great advantage of the majority of the medical profession because their long-range effect will be to establish in the public mind that Michigan Blue Shield is properly and efficiently run. And perhaps, even more importantly, that the medical profession is NOT misusing or abusing Blue Shield at the expense of the subscribers.

Moreover, knowledge and publicity concerning such "control" programs helps educate the subscriber not to put pressure on the physician for needless use of Blue Shield benefits. It puts an effective weapon in the hands of a doctor faced with this kind of patient pressure also. The doctor is in a much sounder position to declare with no equivocation that "it just can't be done," because Blue Shield has effective methods for discovering and rejecting payment on unnecessary or improperly reported services.

When Michigan Medical Service filed in January of 1961 a request for a rate increase, there was, in accordance with the Insurance Commissioner's 1960 directive, an extensive and detailed section meeting his request to review and establish procedures to prevent misuse or abuse.

Here are some of the main points excerpted from that section to serve as a brief resume of the MMS Utilization Control Programs, past, present and future.

First of all, MMS for several years has sent a copy of the Doctor's Service Report to the subscriber. This subscriber's copy specifies the date of service; the general nature of the service (i.e., surgical, obstetrical, in-hospital medical care); and the doctor reporting and being paid for the service. It also suggests that if the subscriber feels there is any discrepancy or there is something he does not understand, he should report it to MMS to be checked.

This is a basic control instrument extremely effective in areas of actual attempted fraud. Now, as it is tied in directly with the relatively-new "Utilization and Liability Control Activity," it is gaining quickly as a major source of prompt, thorough investigation of complaints. This has meant, too, that both the subscriber and the doctor are assured speedy and accurate evaluation of complaints.

2. Monthly comparison audit of doctor-office reported procedures using IBM and electronic tapes of the MMS data processing center. This gives a comparison of frequency of procedures for each doctor. This has proved to be a most productive technique of case-finding and checking to date. Obviously this first provides only raw data which must be carefully evaluated. For example, specialists in a given field are naturally and expectedly going to have more than the average for certain procedures in their field of specialty. But someone outside that field with an above-normal number of that procedure warrants some closer checking.

3. Careful thorough investigation of complaints. This stems in part from the complaints triggered by the subscriber copies of the Doctor's Service Reports. It also involved wholly unsolicited complaints from

various sources including doctors, boards of registration, the insurance department and even commercial insurance firms checking into double-coverage cases which have aroused their interest.

These investigations also involve an average of 500 random-sample subscriber letters sent out monthly which are really questionnaires-in-depth about satisfaction or dissatisfaction with Blue Shield and the way services were rendered and covered.

4. Suggested for the immediate future is institution of a state-wide system of Audit and Review Committees on hospital staffs. It is hoped these would function to make determinations of liability for both Blue Shield and Blue Cross in such areas as diagnostic admissions, concurrent medical care, overstays and unnecessary hospitalization as well as helping perform random sample or complete audits of hospital cases.

Naturally much of the success of this kind of "control program" outlined lies in communication about it and direct knowledge of it both by the medical profession and the subscriber. Michigan Medical Service has stepped up its communications-flow with the profession through the monthly "Blue Shield Record," the 125 Liaison Committees, a stepped-up program of talks by Blue Shield board members and professional relations representatives, specific letter-reports by MMS officials and the special Utilization and Liability Control Committee of the Board of Directors.

Similarly all available communications channels between MMS and its subscribers are being implemented and strengthened. There is no question but that these strengthened and expanding utilization control programs assure the members, the medical profession and the general public that all possible avenues of misuse are being effectively blocked.

LIAISON COMMITTEES: A PERSON-TO-PERSON APPROACH

READING TIME: 2 MINUTES, 40 SECONDS

Communication, as most of the articles in this section emphasize, is the basis of understanding and basic public relations. Dr. McKean indicated in his opening article in the section that the more personal, the more individual the contact between Blue Shield, the doctor and the patient, the more effective the result.

The problem of communication of ideas, of policy, of financial, political and marketing problems between Blue Shield and the doctor became steadily more acute as the plan grew. In late 1959, the Board of Directors set up a Professional Relations Committee to take a long, hard look at what might be done to solve these problems.

The Committee in early 1960 discovered from a state-wide survey that despite three years work on the M-75 program by the House of Delegates and wide publicity given it, the average physician in Michigan had little understanding of the policy responsibility of the MMS Board of Directors and little knowledge of the reasons behind policy decisions by Blue Shield.

Much material was being produced directly by Blue Shield in various publications media for the doctors and much was carried in the Medical Journals. The problem seemed to be lack of intimate interest by the individual physician.

The committee decided the most effective technique must be based on a direct, personal, person-to-person approach.

Therefore, in mid-1960 letters were sent to the chief of staff of every hospital and to the president of every county medical society requesting the appointment of a Professional Relations Liaison Committee with Michigan Medical Service. Aim: to establish better and more intimate contact and communication between MMS and the doctors.

The impact of this letter, plus the personal efforts of members of the Professional Relations Committee and the MMS Professional Relations Staff, in the last six months have been highly successful.

Today there are more than 125 such liaison committees. In urban areas, they are usually at hospital staff level. This helps keep them small and intimate. In less populated centers, they are at the county medical society level.

This is a heartening start. It indicates that the idea works and has

grass-roots acceptance. There are, of course, areas where committees are not yet established. There is still considerable variance in interest and effective accomplishment, taking one committee against another. But it is reasonable to assume that the success and enthusiasm of the majority will be infective and spread statewide within the year.

Of obvious interest, of course, is how these liaison committees work and what is the general method of communication-flow between them and the individual doctor. In reverse it is important what avenues exist between the individual doctor and Blue Shield.

Quite briefly, it is this: As soon as MMS is informed that a committee has been established, the Blue Shield Professional Relations representative in that area visits the chairman. They arrange convenient meetings to follow each MMS board meeting.

At such meetings, the MMS representative has been thoroughly briefed so he can discuss all points of the Blue Shield board action he reports. Moreover, each committee member gets a resume of the minutes of the board meeting. From that comes a flow of questions and answers. At such meetings news items and articles of opinion on the medical economics picture are also brought to the liaison committee's attention.

In short, the MMS representative at such a meeting tries to keep members informed not only of the specific actions of the MMS board of directors, but the reasons behind the actions.

The meeting, however, is just the first step in an effective liaison committee. The committee members are asked to report back to their county medical group or hospital staff what information they've received. By the same token, they are asked to relay back to the MMS representative criticisms or suggestions they get from their colleagues.

The Professional Relations Committee feels that the activities of these liaison committees in the short few months the program has been in existence have stimulated interest and discussion among the practicing physicians. And it is they who in the long run must individually make the necessary and critical choices between alternative answers to the future economics of American Medicine.

The Committee, of course, realizes that the effort to date is not reaching every physician in Michigan. But that is the goal. The Committee hopes that soon every medical society and every hospital staff will have liaison committees to help get material and ideas to and from the physicians in a steady flow. Then decisions will be based on a fuller knowledge and understanding of the problems physicians and Blue Shield face together.

**MEDICINE'S CONCERN
FOR AGED
IS LONGSTANDING**

AN EDITORIAL
BY EDWARD ANNIS, M.D.
READING TIME: 1 MINUTE, 10 SECONDS

It takes a bit of doing these days to separate the wheat from the chaff in this broad question of medical care and medical care costs, particularly as they apply to the aged. In the full bloom of this newly-found issue of the politicians, too many persons lose sight of the simple fact that the history of medicine in America is one in which the doctors of this country have been taking care of people.

For many, many years, the medical profession has been in the forefront of those who have felt that every man, every woman, every child in America should have the finest medical care when needed.

Medicine's concern for the elderly has always existed. It did not start with doctors—as it has with certain people in the political arena—just a few years ago. This recent concern by some with political motives and ideas coincides strangely with the fact that they now represent 16-million votes. Incidentally, the doctors have considerable responsibility for those 16-million votes; we're very proud of them. We know that since the turn of the century we've added 20 years in average life expectancy in this country.

Moreover, we in the profession feel that the government does have a responsibility to help people who cannot help themselves. This is the reason we have supported the Kerr-Mills law, which states that those people who need help should have help.

I am unalterably opposed to the social security approach. First, because it is an approach that benefits the rich as well as the poor. Second, because it is a poor man's tax. Forty percent of the nation's income is not subject to social security and the poor man with an income of \$4,000 to \$5,000 a year pays disproportionately into the fund. Third, I feel strongly that this is socialized medicine for the growing segment of our population over 65.

Note that every bill that has been introduced lays down provisions that services shall be provided by those hospitals and those individuals *under contract with the federal government under rules and regulations prescribed by the federal government*. This to me is socialized medicine for the doctors—and if we have it for the doctors, we shall soon have socialized medicine for the patients.

**THE OTHER SIDE
OF THE
"COST-USE" COIN**

READING TIME: 5 MINUTES, 10 SECONDS

Keats Vining, M.D., a Grand Rapids internist, requested at the Blue Cross-Blue Shield rate increase hearing in Grand Rapids last February 15th that he be heard from the floor simply as an individual physician. Here are excerpts of the highlights of his extemporaneous remarks:

"I am not speaking here to represent the medical profession. I am speaking as an individual physician. I have read with great interest the minutes of this type of hearing when held in Detroit and others in the past years every time a rate increase becomes necessary for Blue Cross-Blue Shield. This time I have become fed up with hearing the various statements about mal-use, over-utilization and abuse by hospitals and doctors, and I have decided it was time someone who was practicing medicine placed a few salient facts on the table for consideration when discussing the need for rate increases.

"Now it is true, and no one will deny it, that the cost of medical care has gone way up in the last 10 years, just as in the last 50 years if you want to go back that far . . . I am not here to apologize for its going up. I am here to brag about the increase in cost to anyone who carries health insurance, because you have never bought so much for so little in your life, and you will never buy so much for so little in any other aspect of living. What am I trying to say? Just this:

"I recently had in the hospital a 21-year old boy with a bizarre type of heart disease. I had followed his case for 10 years. We could not put our finger on exactly what it was 10 years ago—we did not have the equipment or the know-how. But fortunately in the past 10 years big medical centers like Johns Hopkins, Mayo Clinic and the University of Michigan Medical Center have been doing a real crash program on coming through with means of answering these questions.

"Now we take such a patient through a procedure called cardiac catheterization, in which we put a tube from the outside of the body to the inside of the heart to measure variations in saturation of the blood with oxygen in the four chambers of the heart. We measure the variation in pressures within the four chambers, we measure the blood flow back and forth to find out where it is going that it should not go, and how much is going there. The room in which this is done is equipped with

complicated x-ray equipment and a machine that will take six pictures a second as a radio opaque dye flows through the heart. It reveals afterward where it was. There is also a machine that records electronically the exact pressures at various times and still another machine that samples the blood for oxygen content.

Well, I think I have said enough to show you that this procedure is fabulously expensive when compared to listening through a stethoscope which you can buy for \$4.50, not to mention the cost of the training of the man who is listening. We made a diagnosis on this boy. A hole existed between the two auricles of his heart. He was born with this. We knew exactly how big that hole was and how much material it was going to take to fill that hole, and how it should be done.

At the right time and the right age, he was taken to the operating room. His arterial system was disconnected from his heart and connected to an artificial heart which kept the blood circulating. He was connected to an artificial lung which kept the right amount of oxygen in his blood. Then his chest was opened and his heart opened wide so the surgeon could see the defect, knowing ahead of time how big a patch he needed. He had it ready and it was sewed in.

Then the heart was closed, the chest was closed, the artificial pump was unplugged and the artificial lung disconnected. All this time electronic computers and scanning equipment were telling the surgeon and the physiologist and the internist exactly what was happening . . .

"The Mayo Clinic published a cost breakdown on one of these procedures a few years ago.

Sixteen people were involved for eight hours. Amortizing the cost of the equipment and the personnel, it cost someone \$50,000 for one such operation. No one pays \$50,000 for such a procedure today. The cost is partly defrayed by endowments and special grants. It is partially defrayed by general hospital income. *However, it has to be paid for as a part of modern medical care.* Five years ago we could not do this procedure . . . the equipment was not available. Today it is available and in two of our Grand Rapids hospitals this procedure can be carried out when indicated."

Dr. Vining cited two other dramatic cases in point. One involved a friend who eight years ago suffered severe chest injuries in an auto accident and could not breathe for himself. He died in 48 hours. Five years later a man in Chicago developed a machine that connects through the trachea and breathes for a victim until the surgeon can repair the crushed chest.

It came too late for Dr. Vining's friend. But it is now used time and again in the hospital's "intensive care unit" at Grand Rapids.

And Dr. Vining added:

"The machine alone costs \$1,500. There are now three of them on hand for such emergencies and nobody is without this help. We have to have nurses in this intense care unit, one nurse for practically every patient, highly technically trained specialists in this type of nursing care.

"Now we may have six or seven nurses on duty that are not working, but we have them there because somebody may clobber somebody else in an auto accident out on M-16 and we may have five serious accident cases in ten minutes. *It costs a lot more money than when we just brought all patients to the emergency room for terminal relief of pain because we could do no more than just that.*"

The second case Dr. Vining cited involved kidney failure due to an unknown toxic substance.

"Five years ago," Dr. Vining told the Hearing, "such a patient would be dead in 48 to 72 hours . . . But now, and in this case, we had an artificial kidney. We've also developed a complicated alternate method in which we run fluids through the peritoneal cavity with electrolyte and complicated bio-chemical control . . . Point is we had it, this patient stayed under these controls for three solid weeks with around the clock nursing and tests requiring the work of many, many people for many hours.

"But he is alive and working this afternoon. He is 48 years old and back on his feet able to care for his wife and four children. Five years ago his wife would have been out looking for a job. Her husband would have been buried within the week."

". . . Now I submit that we can hold the line for five years and make no further advances. If you are satisfied with the quality of medical care today, if that is what you mean when you say you cannot pay any more insurance, we can stop here. But you are not going to say it and you are going to want the best medical care and the medical profession is going to want to give you the best and most advanced care . . .

"I am tired of having people say that overutilization is the reason for increase cost. I am tired of having people say that doctors are not honest about this thing. I submit to you that the percentage of honest and dishonest doctors in the medical profession is probably not significantly different from the percentage of honest and dishonest labor leaders, honest or dishonest lawyers, or honest or dishonest bricklayers . . .

"I submit to you that the increments of misuse of anything, whether it be the hand you hold in a poker game; the insurance for repairing your car when it is damaged; or whether it be the hospital-medical coverage you carry, it is an insignificantly small amount. If you base your decisions and conclusions on that, it means you are being led astray.

"The reasons for the increased cost of medical care from the time of Hippocrates has been increased knowledge of what to do and increased ability to do it. Unfortunately, the more you can do to keep people healthy and alive, the more it is going to cost people to stay that way and take advantage of it. I think the Insurance Commissioner should know this, and I want to say it for the record.

"When you feel you must criticize the increased cost of your health care then think—Do you want your grandson who may be born with a congenital heart defect to be denied the opportunity to have it corrected and live a healthy, normal life? Do you want your husband or wife if exposed to a kidney toxin to just die for lack of something which could save them?

"If you ask medicine and research to hold the line and not let it get any more expensive—or if you ask us to decrease the cost back to three years ago, then we have to run some red pencils through some of these things we can do today. We will have to say "no" to the new advances that are just around the corner. We say "no" because people say they can't afford them.

"But as a doctor I can say we do not want to do these things and I can assure you we are not going to do them. We are going to fight for every bit of improvement in medical care possible, and we are going to come right back at you and tell you why it is costing more.

"We cannot promise you that medical care is going to get cheaper. Actually we will openly tell you that it is probably going to get more expensive.

"We CAN promise you that medical care is going to become better and that it is going to become more effective in keeping you healthy and saving your lives. So ask yourself if life and health is worth it.

"If it is, the answer is that you are going to have to pay more for it. I do not care if you pay more to Blue Cross-Blue Shield, or an increased premium to Continental Casualty or the Aetna Company. They are all going to come back at you for more money for your coverage, or you are going to have to dig deeper into your own hip pocket if you pay straight costs yourself. I do not care what method of payment you utilize, the cost is going to go up. You might just as well face it."

MICHIGAN MEDICAL SERVICE

PAYMENTS FOR SERVICES TO SUBSCRIBERS BY RESIDENCE OF DOCTORS OF MEDICINE FOR YEAR 1960

	Participating 12/31/60	Non- Participating 12/31/60	Percent of Total
1. Alcona.....\$	3,171	—0—	.01
2. Alger.....	19,162	—0—	.03
3. Allegan.....	70,645	\$ 7,841	.13
4. Alpena.....	261,933	—0—	.42
5. Antrim.....	8,506	—0—	.01
6. Arenac.....	31,512	—0—	.05
7. Baraga.....	46,740	—0—	.08
8. Barry.....	44,673	—0—	.07
9. Bay.....	780,845	214,730	1.61
10. Benzie.....	41,361	10	.07
11. Berrien.....	316,280	40,634	.58
12. Branch.....	165,132	1,654	.27
13. Calhoun.....	655,657	85,443	1.20
14. Cass.....	18,645	30	.03
15. Charlevoix.....	53,990	—0—	.09
16. Cheboygan.....	86,144	—0—	.14
17. Chippewa.....	290,464	—0—	.47
18. Clare.....	12,029	191	.02
19. Clinton.....	189,648	2,360	.31
20. Crawford.....	58,395	6,885	.11
21. Delta.....	55,831	12	.09
22. Dickinson.....	79,304	14,919	.15
23. Eaton.....	177,688	178	.29
24. Emmett.....	71,407	219,485	.47
25. Genesee.....	553,126	4,413,072	8.01
26. Gladwin.....	58,754	—0—	.09
27. Gogebic.....	65,486	55	.11
28. Grand Traverse.....	241,768	133,922	.61
29. Gratiot.....	100,668	21,397	.20
30. Hillsdale.....	122,173	1,127	.20
31. Houghton.....	117,132	—0—	.19
32. Huron.....	170,024	10	.27
33. Ingham.....	2,003,317	438,301	3.93
34. Ionia.....	169,759	4,938	.28
35. Iosco.....	88,027	21,173	.18
36. Iron.....	17,291	—0—	.03
37. Isabella.....	264,414	—0—	.43
38. Jackson.....	484,573	55,021	.87
39. Kalamazoo.....	500,099	154,646	1.06
40. Kalkaska.....	4,897	—0—	.01
41. Kent.....	1,897,320	273,823	3.50
42. Keweenaw.....	30,856	—0—	.04

MICHIGAN MEDICAL SERVICE

PAYMENTS FOR SERVICES TO SUBSCRIBERS BY RESIDENCE OF DOCTORS OF MEDICINE FOR YEAR 1960 (Continued)

	Participating 12/31/60	Non- Participating 12/31/60	Percent of Total
43. Lake.....	\$ 71	\$ —0—	.00
44. Lapeer.....	250,277	28,553	.45
45. Leelanaw.....	24,007	17,347	.07
46. Lenawee.....	320,216	—0—	.52
47. Livingston.....	154,776	20	.25
48. Luce.....	40,939	—0—	.07
49. Mackinaw.....	12,935	5	.02
50. Macomb.....	1,179,840	317,364	2.42
51. Manistee.....	62,531	660	.10
52. Marquette.....	296,844	47,463	.56
53. Mason.....	59,634	12,041	.12
54. Mecosta.....	76,679	—0—	.12
55. Menominee.....	43,162	—0—	.07
56. Midland.....	17,526	9,177	.04
57. Missaukee.....	47,923	—0—	.08
58. Monroe.....	188,994	4,320	.31
59. Montcalm.....	138,506	9,128	.24
60. Montmorency.....	255	491	.00
61. Muskegon.....	236,051	61,379	.48
62. Newago.....	79,538	—0—	.13
63. Oakland.....	2,976,267	1,874,479	7.83
64. Oceana.....	62,785	—0—	.10
65. Ogemaw.....	75,325	—0—	.12
66. Ontonagon.....	39,611	—0—	.06
67. Osceola.....	61,504	—0—	.10
68. Oscoda.....	632	—0—	.00
69. Otsego.....	42,820	—0—	.07
70. Ottawa.....	206,595	3,566	.34
71. Presque Isle.....	62,642	—0—	.10
72. Roscommon.....	8,139	—0—	.01
73. Saginaw.....	1,827,763	169,371	3.23
74. St. Clair.....	703,199	63,192	1.24
75. St. Joseph.....	97,905	—0—	.16
76. Sanilac.....	79,470	1,450	.13
77. Schoolcraft.....	38,898	—0—	.06
78. Shiawassee.....	347,367	86,502	.70
79. Tuscola.....	115,739	—0—	.19
80. Van Buren.....	192,909	—0—	.31
81. Washtenaw.....	2,722,766	181,337	4.69
82. Wayne.....	18,860,884	10,587,450	47.55
83. Wexford.....	156,606	93	.25
TOTAL.....	\$42,339,376	\$19,587,245	100.00

MICHIGAN MEDICAL SERVICE

PAYMENTS FOR SERVICES TO SUBSCRIBERS BY RESIDENCE OF DOCTORS OF OSTEOPATHY FOR YEAR 1960

	Amount	Percent of Total		Amount	Percent of Total
1. Alcona.....	—0—		43. Lake.....	\$ 784	.01
2. Alger.....	—0—		44. Lapeer.....	133,724	1.29
3. Allegan.....	\$ 436	.00	45. Leelanaw.....	—0—	
4. Alpena.....	—0—		46. Lenawee.....	2,034	.02
5. Antrim.....	5,172	.05	47. Livingston.....	41,634	.40
6. Arenac.....	15,471	.15	48. Luce.....	—0—	
7. Baraga.....	200	.00	49. Mackinac.....	4,781	.05
8. Barry.....	4,962	.05	50. Macomb.....	589,209	5.66
9. Bay.....	75,082	.72	51. Manistee.....	13,100	.13
10. Benzie.....	1,975	.02	52. Marquette.....	—0—	
11. Berrien.....	11,693	.11	53. Mason.....	21	.00
12. Branch.....	4,594	.04	54. Mecosta.....	19,132	.18
13. Calhoun.....	65,846	.63	55. Menominee.....	—0—	
14. Cass.....	83	.00	56. Midland.....	1,395	.01
15. Charlevoix.....	—0—		57. Missaukee.....	—0—	
16. Cheboygan.....	41	.00	58. Monroe.....	26,086	.25
17. Chippewa.....	290	.00	59. Montcalm.....	114,203	1.10
18. Clare.....	60,431	.58	60. Montmorency.....	1,159	.01
19. Clinton.....	12,305	.12	61. Muskegon.....	38,893	.37
20. Crawford.....	3,760	.04	62. Newago.....	13	.00
21. Delta.....	—0—		63. Oakland.....	1,346,348	12.94
22. Dickinson.....	—0—		64. Oceana.....	—0—	
23. Eaton.....	25,454	.24	65. Ogemaw.....	3,366	.04
24. Emmett.....	32,823	.32	66. Ontonagon.....	—0—	
25. Genesee.....	1,403,309	13.48	67. Osceola.....	44	.00
26. Gladwin.....	4,075	.04	68. Oscoda.....	4,382	.04
27. Gogebic.....	229	.00	69. Otsego.....	1,294	.01
28. Grand Traverse.....	55,834	.54	70. Ottawa.....	4,668	.04
29. Gratiot.....	23,451	.23	71. Presque Isle.....	—0—	
30. Hillsdale.....	8,029	.08	72. Roscommon.....	9,742	.09
31. Houghton.....	—0—		73. Saginaw.....	409,423	3.94
32. Huron.....	33,137	.32	74. St. Clair.....	15,129	.15
33. Ingham.....	351,149	3.38	75. St. Joseph.....	485	.01
34. Ionia.....	22,367	.21	76. Sanilac.....	16,631	.16
35. Iosco.....	9,567	.09	77. Schoolcraft.....	260	.00
36. Iron.....	—0—		78. Shiawassee.....	27,814	.27
37. Isabella.....	14,505	.14	79. Tuscola.....	38,873	.37
38. Jackson.....	85,358	.82	80. Van Buren.....	906	.01
39. Kalamazoo.....	38,718	.37	81. Washtenaw.....	176,504	1.70
40. Kalakaska.....	—0—		82. Wayne.....	4,714,778	45.32
41. Kent.....	273,479	2.63	83. Wexford.....	3,406	.03
42. Keweenaw.....	—0—		TOTAL.....	\$10,404,046	100.00

SUMMARY OF 1960 PAYMENTS

	Amount	Percent of Total
Doctors of Medicine:		
Participating.....	\$42,339,376	54.72%
Non-Participating.....	19,587,245	25.32
Total Michigan M.D.'s.....	61,926,621	80.04
Total Michigan Osteopaths.....	10,404,046	13.45
Out-of-State Doctors and Unclassified.....	5,031,993	6.51
Total Payments Year 1960.....	\$77,362,660	100.00%

**RATE INCREASE REPORT:
COOPERATION IS THE BYWORD**

READING TIME: 2 MINUTES, 40 SECONDS

In January of this year, Michigan Medical Service filed a request for a 13.5% rate increase. It was based on actuarial studies of the recent trends in increase in use of services. On the basis of those trends, it was the amount needed to wipe out a negative contingency reserve of nearly \$2 million, set aside reserves of at least 3% of income and keep Blue Shield in the black for at least two years.

Insurance Commissioner Frank Blackford after three hearings in February and delays engendered by two union local officials, approved a 10% increase for Michigan Medical Service, effective June 1.

This was contingent upon Michigan Medical Service submitting a plan under which 3% of monthly income could be allocated to reserves and contingent upon MMS neither reducing benefits nor increasing fees in the fee schedule during the life of the increase.

Such a program was approved by the board of directors of Michigan Medical Service unanimously at the regular meeting on April 12, 1961. MMS noted in submitting its plan to the Commissioner that "your (the Commissioner's) report stated that Michigan Blue Shield ranks among the best in the country in terms of benefits provided members and low administrative costs."

The letter and plan to the Commissioner pointed out that Michigan Medical Service shares the same concern as the Commissioner over the rising costs of benefits, but observed also that the fee schedules developed in late 1957, remain substantially unchanged since the introduction of the M-75 program in late 1958.

To achieve a stable financial position and set aside 3% per month for a contingency reserve on the 10% increase granted will require full cooperation from the subscribers, from the medical profession and from Michigan Blue Shield.

This, you will note, has been the underlying theme of the preceding articles in this 1961 "Special Blue Shield Section" of the MSMS Journal.

Incidentally, in its letter to the Insurance Commissioner outlining the plan, MMS also pledged to promote maximum operating efficiency and continue to improve the effectiveness of the various "use-control" programs.

There have been some early indications that the joint efforts of Blue

Shield and the medical profession in the last few months have begun to bear fruit in a slight decline in the rate of increase of utilization.

As the other articles in this report show, many of the recommendations and suggestions of the Insurance Commissioner have been implemented and are being expanded with the effective cooperation of the physicians.

Kenneth Johnson, M.D., president of the Michigan State Medical Society, perhaps summed up the situation as realistically as it can be in a recent panel on "What Can the Hospitals, Doctors and Public Do to Hold the Line on Health Care Costs" before the Blue Cross-Blue Shield Member Council in Lansing.

Dr. Johnson in essence said that first of all, we need a general trend to reduce the costs—stem inflation—in everything.

Then, specifically in the field of medical care costs, he believes the public must bear its share by reducing its demands and letting the doctors see that *patients really are concerned about keeping costs down*.

He also believes, however, that the doctor must play a more militant role in this area.

"They (the doctors) are just going to have to make decisions in a lot of these areas and then not worry about it," he said.

They are going to have to be more resistant to ordering 'the latest thing' when it just isn't needed but the patient is pressuring because 'he's read about it somewhere'."

There is no question but that the reduction of the MMS increase request from 13.5% to 10% means that the public, the doctor and Blue Shield are going to have to work together to the end that every dollar is properly used while no dollar is spared for care that is needed.

Only through this kind of cooperation will Blue Shield stay financially sound yet maintain the high level of benefits both the public and the medical profession demand.

Paralysis Agitans Syndrome

A Report on the Results of Testing and Treatment With High Frequency (Sedac) Currents

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THE high frequency (sedac) currents used in this treatment project have been defined and elaborated in a previous paper.¹ In this presentation, the terms "high frequency" and "sedac" will be used interchangeably. Briefly, the instrumentation utilized in production of the high frequency currents is the Reiter S.O.S. Electrostimulator. This instrument delivers, in the testing and treatment situation, variable bursts of current reaching to 1,000,000 cycles and much more. Power may be varied from a fraction of one sedac unit to 1,500 units. The sedac unit is a descriptive electronic term and serves as a substitute equivalent for highly complex mathematical formulation of many frequencies at various intensities. The principle followed in formulating the sedac unit is similar to that used in defining the Roentgen unit as the complex formulation of an x-ray beam.

In sharp contrast to galvanic current, the sedac currents are capable of stimulating both sensory and motor components throughout a wide range, yet remaining well under the pain discomfort threshold.

The high frequency currents were introduced into medicine about five years ago. They most certainly appear to have opened an entire new field for investigation. A number of investigators have published papers dealing with this subject.²⁻¹⁵ Clinicians report effectivity of therapy in functional disorder, in organic psychiatric syndrome and in neurological entity.

Two years ago, two men with Parkinson's Disease, having sustained psychotic disorder, were admitted to the Psychiatric Service of the Jennings Memorial Hospital. They were placed on high frequency therapy. Each patient received four hours of treatment weekly over a period of four weeks. Not only did the psychotic situation lessen in intensity, the neurological symptoms were relieved. It was decided that it might be interesting and rewarding, as a pilot

study, to test and treat a series of paralysis agitans patients (of as pure a neurological culture as possible).

A discussion of theory, mechanism, action and technique have been described and published previously.¹ A short explanation, however, is in order. As in other types of electrocerebral therapy, the specific action of high frequency current in the therapeutic procedure is unknown. The high frequency testing procedures are based upon the principle of "excitation." The minimum sensitivity and the maximum tolerance modalities constitute the extremes of the excitation factor. The first modality is defined as the sedac unit value noted when the patient first perceives the current. The second modality is the value noted at the upper limit of the pain discomfort threshold.

Sedac testing and treatment is instigated over many "brain areas" by varying the scalp leads. A single brain area may be tested or several areas may be together enveloped, tested and treated. The positive and negative lead set of wires emerging from the instrument may be made fast to the subject in either of two ways. If one electrode is fastened to an extremity (usually the right forearm) and the other is placed on a specific scalp area—the method is designated as *monopolar*. If both positive and negative electrodes are fastened to specific areas, the method is defined as *bipolar*.

The several brain areas may test and treat within

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M.D.



From the Grace Hospital, Detroit, Michigan.

June, 1961

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TABLE I. HIGH FREQUENCY (SEDAC) TESTING AND TREATMENT OF ELEVEN CASES OF PARKINSON'S DISEASE

Case and No.	Age	Sex	Marital Status	Duration of Illness Years	Etiology	Medication Taken During Therapy	Sedac Test Findings	E. E. G. Findings	Symptoms, Findings and Impairment
M.H. (1)	66	F	Mrd.	7	Art. scl.	Artane Benedryl	All areas reduced maximum tolerance and dulled minimum sensitivity.	Dysrhythmia Grade (1) Generalized	4 plus gait, station, rigidity, tremor, movements, vasomotor, pain in left arm.
P.P. (2)	71	M	Mrd.	10	Art. scl.	None	All areas elevated maximum tolerance.	Normal	1-2 plus facies, gait, station, tremor, and movements.
A.S. (3)	59	F	Mrd.	6	Art. scl.	None	Occiput and vertex posterior areas elevated maximum tolerance.	Dysrhythmia Grade (2) Left temporal	1-2 plus gait, station, rigidity, movements, head tremor.
L.V. (4)	61	F	Mrd.	5	Trauma (Head injury)	Hyocine Benzedrine Barbital	Occiput and jaw areas elevated maximum tolerance.	Dysrhythmia Grade (2) Generalized	4 plus fatigue, facies, gait, station, movements, tremor, rigidity, pain extremities, depression.
A.D. (5)	65	M	Mrd.	10	Virus infec. Shingles	Artane	All areas elevated maximum tolerance and ultra minimum sensitivity.	Dysrhythmia Grade (2) Generalized	3-4 plus fatigue, facies, gait, station, rigidity, tremor, vasomotor, oculo-gyric and depression.
T.P. (6)	75	M	Mrd.	11	Previous encephalitis (1918)	Artane	All areas elevated maximum tolerance.	Bitemporal Normal	3 plus fatigue, facies, gait, station, rigidity, tremor movements, speech, oculo-gyric.
S.H. (7)	79	M	Mrd.	6	Art. scl.	Hyocine	All areas elevated maximum tolerance.	Dysrhythmia Grade (1) Bitemporal	4 plus facies, gait, station, rigidity, tremor, movements, vasomotor, speech.
P.P. (8)	67	M	Mrd.	7	Art. scl.	Hyocine Benedryl	All areas elevated maximum tolerance.	Dysrhythmia Grade (2) Bitemporal	3-4 plus gait, station, rigidity, movements, vasomotor, depression.
F.M. (9)	70	F	Mrd.	7	Art. scl.	Barbital	All areas elevated maximum tolerance and dulled min. sens.	Dysrhythmia Grade (2) Generalized	3-4 plus fatigue, gait, station, rigidity, tremor, movements, oculo-gyric.
W.V. (10)	75	M	Div.	7	Art. scl.	None	All areas elevated max. tol. and ultra min. sensitivities.	Dysrhythmia Grade (1) Generalized	2 plus tremor hands, rigidity, movements.
H.W. (11)	59	M	Mrd.	20	Encephalitis following smallpox	Artane Benedryl	All areas elev. max. tol. and dulled min. sens.	Max. L. temp. Dysrhythmia Grade (1) Generalized	4 plus fatigue, facies, gait, station, rigidity, tremor, movements, pain extrem.

the normal range, the ultrasensitive range, or the more insensitive range of current intensity. An approximation of the "normal" and abnormal sedac unit values (the result of five years of investigation) has been determined and described previously.¹⁴

This paralysis agitans treatment project was sponsored and assisted in part by a grant-in-aid from the Grace Hospital of Detroit and was conducted during the summer months of 1959 at this institution. All of the patients receiving therapy were referred by their private physicians.

Eleven patients were included in the project. Four were females and seven were males. The etiologic factors varied widely. The duration of the illnesses likewise was quite diverse, varying from five to twenty years, with a mean average of 8.7 years.

Two hundred and seventy treatments were given. The frequency of therapy was twice weekly, and the duration of each treatment varied from fifty to ninety minutes. Each patient was sedac-tested for minimum sensitivities and maximum tolerances initially, midway through therapy and at termination. In addition, each was subjected to history-taking, a neurologic examination and an electroencephalogram.

Table I describes pertinent data concerning each patient. Figures 1-5 are logarithmic graphic presentations of the data for five individual patients. Each

graph portrays the minimum sensitivities and the maximum tolerances initially, after twelve treatments and at termination. Vertically and to the left are designated the sedac unit values. Below and horizontally, the legend defines the test-treatment positions and other data.

All patients were treated with different leads. Some were treated monopolar and others, bioplar. This differentiation was determined largely by two factors. The first was based on the abnormal test values of any given area. For example, if the left temporal area and the right occiput area measured abnormal, the two areas were enveloped and treated. On the contrary, if the right parietal area and the vertex anterior area measured within the range of normal, treatment was not applied to these areas. The second factor dealt with comfort and tolerance of treatment proper. If the patient tolerated therapy and progressed more satisfactorily with monopolar rather than bipolar leads (or vice versa) his therapy was given accordingly.

If properly and skillfully given, patients have no fear of sedac therapy. Actually, the therapy gives much comfort. The term *sedac* is used because the high frequency currents possess sedative-like qualities. Most of the patients fall soundly asleep during the entire therapy interval.

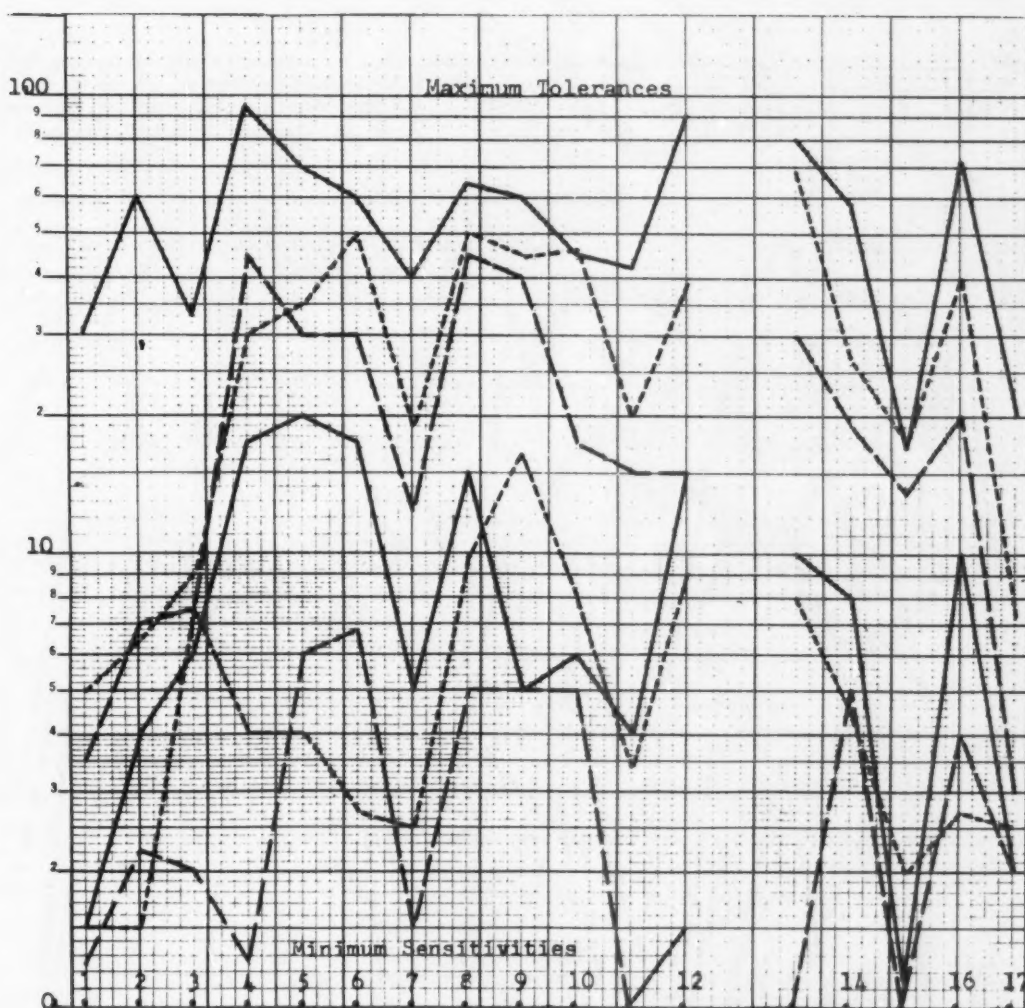


Fig. 1. Case 1. Paralysis agitans syndrome. High frequency (sedac) testing and treatment.

Figs. 1-5. Solid line is initial measurement. Broken line is measurement after thirteen treatments. Dotted line after twenty-six treatments. Monopolar: Indifferent electrode is right forearm. 1. pre front.; 2. vert. ant.; 3. vert. post.; 4. occ. mid.; 5. jaw l.; 6. temp. l.; 7. par. l.; 8. occ. l.; 9. jaw r.; 10. temp. r.; 11. par. r.; 12. occ. r.; Bipolar: 13. jaw l. to r.; 14. temp. l. to r.; 15. par. l. to r.; 16. occ. l. to r.; 17. pre front. to occ. mid.

The criteria of improvement resulting from therapy was based upon the observations and evaluations of the senior author, consultations with relatives or friends of the patient and the statements of the patients, themselves. The phenomena of transference was carefully considered and was not discounted.

Of the eleven patients treated, nine were improved generally, one was slightly improved and one remained unimproved. The improvement in each situation merits comment:

Case 1.—Lessened fatigue, elevated spirits, increased general activity, locomotion improved, ability to tie shoe laces increased.

Case 2.—Generally improved in all spheres, more active, spirits elevated.

Case 3.—Generally improved, lessening of spasm and tremor of head and neck muscles.

Case 4.—Locomotion, general movement and speech improved; tremor lessened; spirits improved; extremity pains relieved.

Case 5.—Elevated spirits, increased mental clarity, five

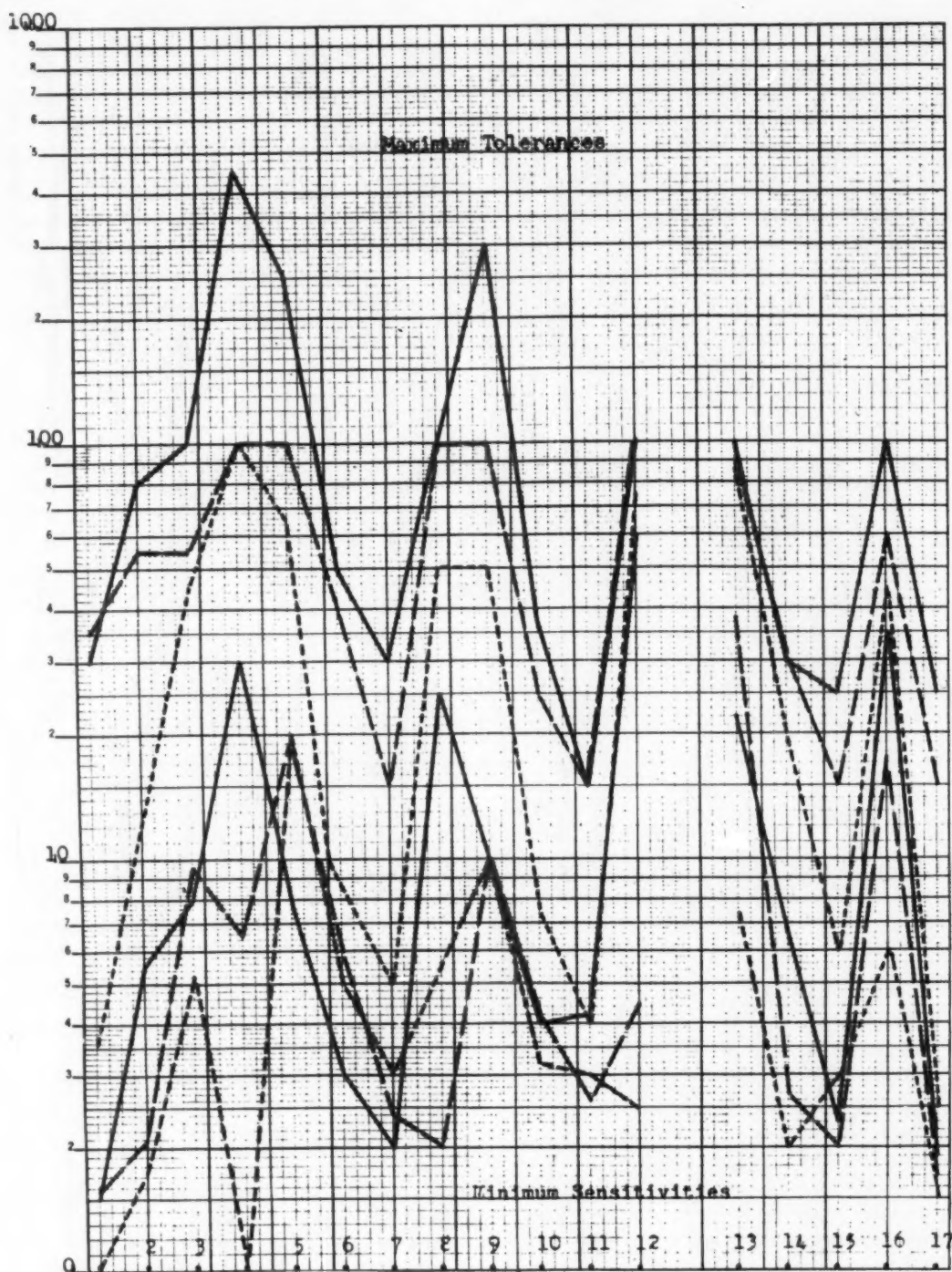


Fig. 2. Case 4. Paralysis agitans syndrome. High frequency (sedac) testing and treatment.

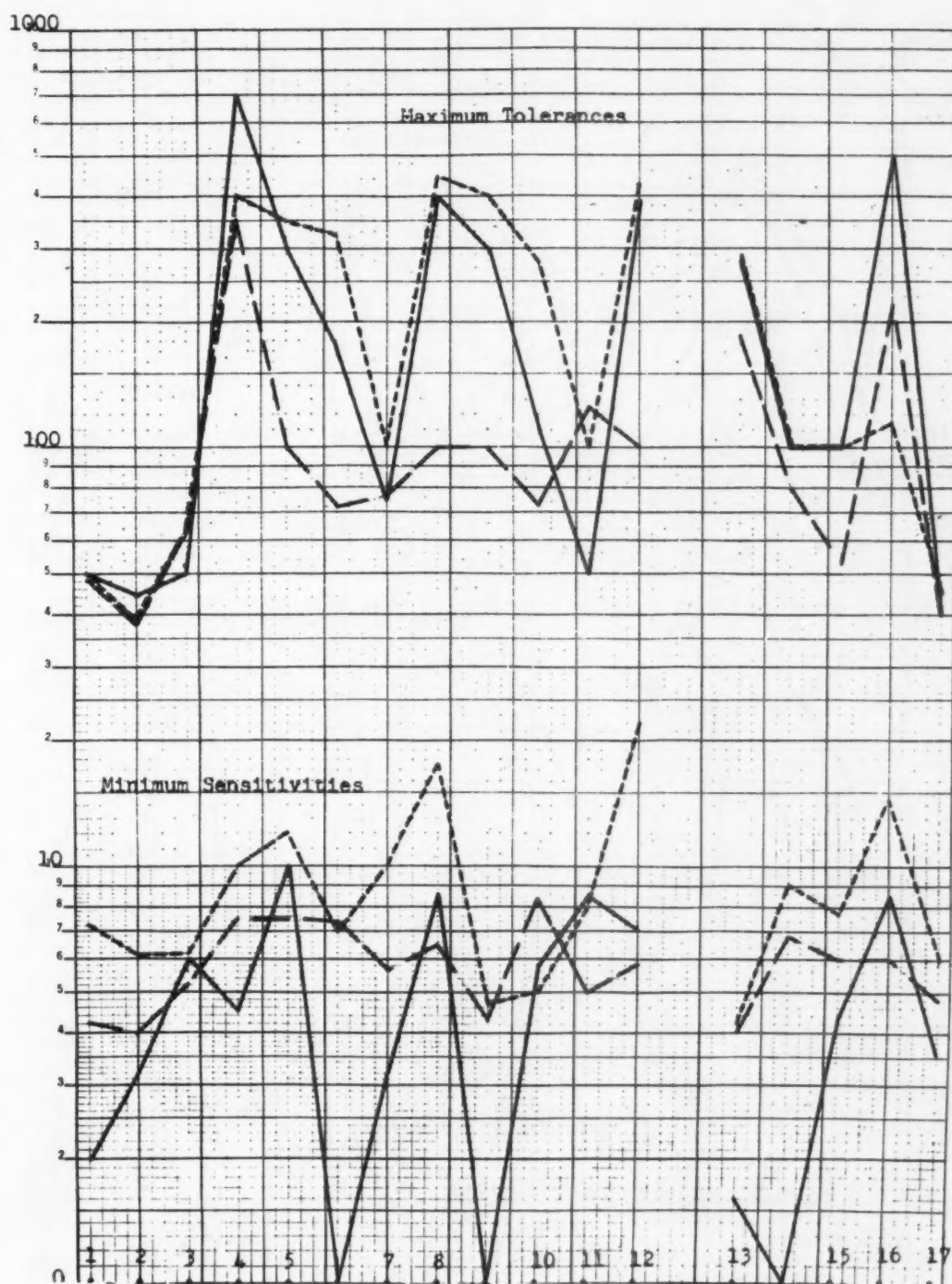


Fig. 3. Case 10. Paralysis agitans syndrome. High frequency (sedac) testing and treatment.

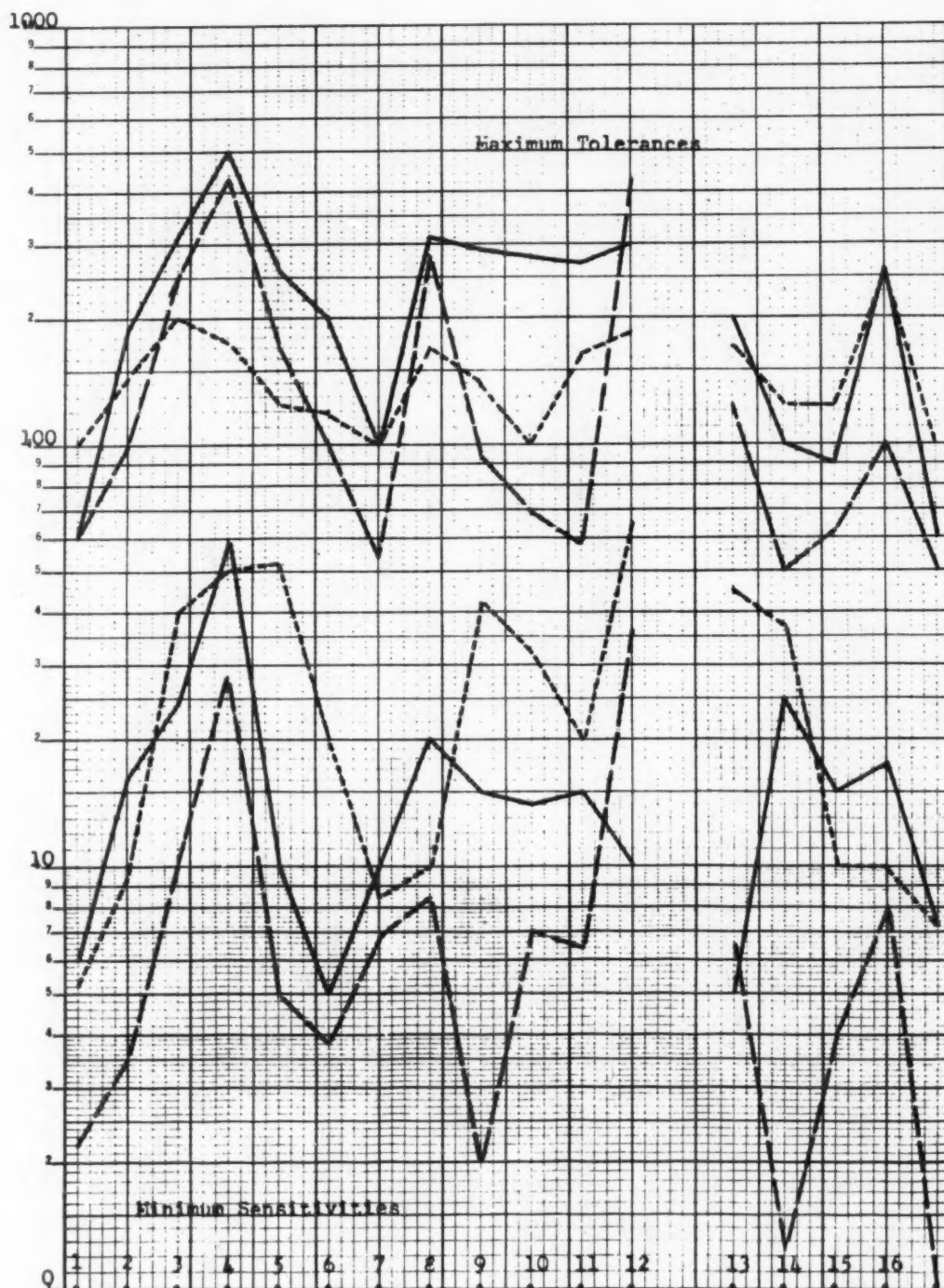


Fig. 4. Case 8. Paralysis agitans syndrome. High frequency (sedac) testing and treatment.

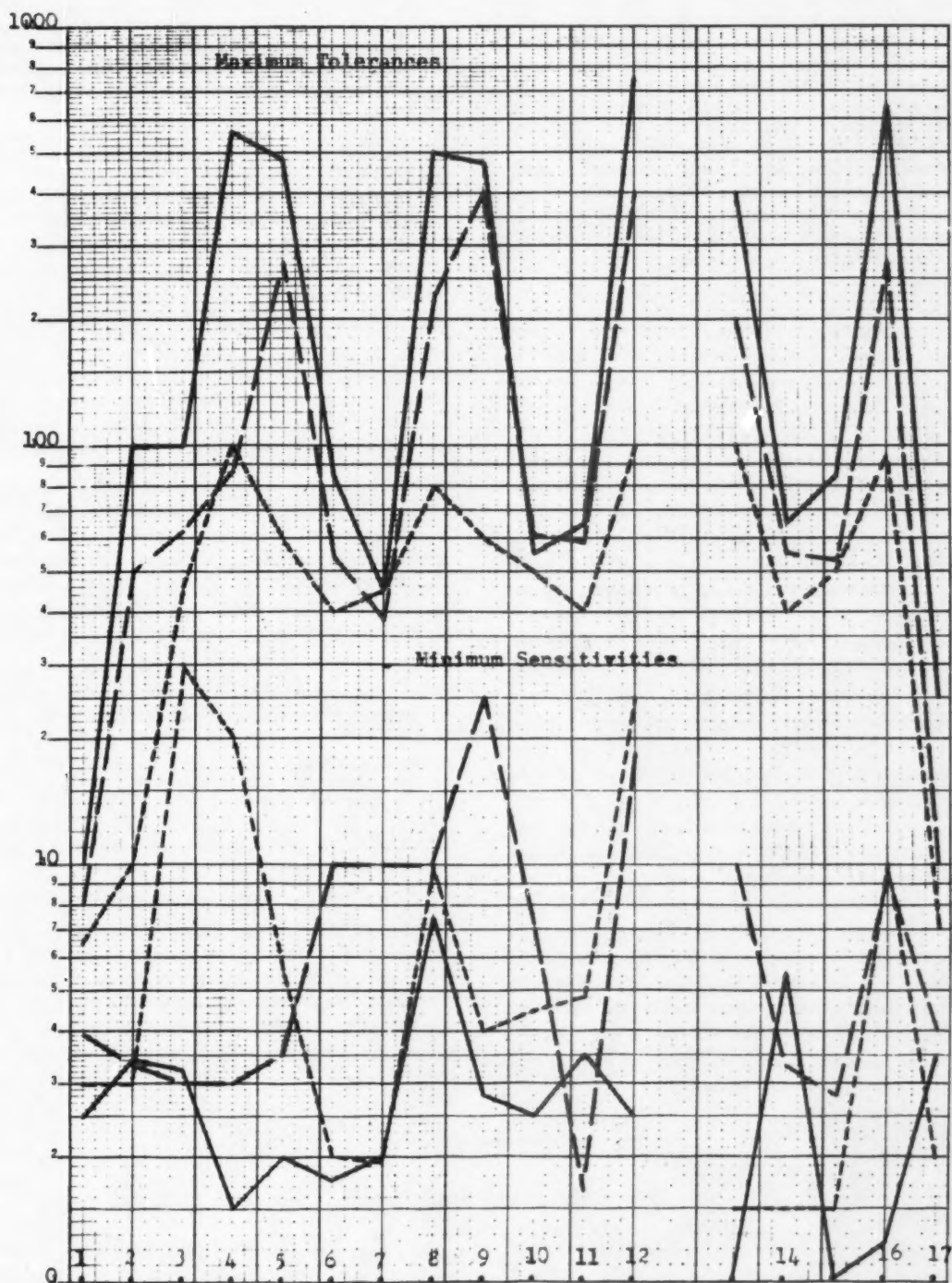


Fig. 5. Case 5. Paralysis agitans syndrome. High frequency (sedac) testing and treatment.

movements improved, patient does odd jobs about house and yard—the first he has done in two years.

Case 6.—Locomotion improved, facial tremor lessened.

Case 7.—Unimproved.

Case 8.—Unimproved except for better spirits.

Case 9.—Spirits improved, mental clarity increased, somewhat more active in household work.

Case 10.—Tremor is much improved; he handles cup, glass and toothbrush better; mental clarity and spirits are up; he is more relaxed and less rigid, walks more easily.

Case 11.—Much improved, has had no falls, spirits and mental clarity are elevated, drooling less, locomotion improved, working on lawn and pulling weeds which he has not done for three years.

The instigation of effective therapy in any organic brain syndrome, whether psychiatric or neurologic or both, is a formidable undertaking. Not only is any therapy frequently discouraging, it becomes quite perplexing as the disease process progresses.

All subjects treated had sustained longstanding deeply ingrained illnesses. At the onset of therapy, effort was made to reduce or discontinue drug medications in all cases. Of the eleven patients, we were successful in removing three from medication, while the electrocerebral therapy was in progress. Parkinson's disease patients are sometimes described as a rather "pill-happy lot." Indeed, they are quite uncomfortable and accustomed to considerable medication intake. During the summer of 1959, Detroit, in particular and the country in general, experienced an extremely hot and humid summer. Frequently, telephone calls were received from the patients asking to resume medication for this reason alone. This may or may not have been a valid reason. At any rate, control of the medication intake itself was difficult and frequently impossible.

It is concluded that, as in certain other chronic brain syndrome disease, the high frequency currents may come to have a place in treatment of paralysis agitans. It is further concluded that, while treatment perhaps need be neither more intense nor more frequent, it should be carried out over a much longer duration of time. Because of many exigencies, this project had to be limited in scope.

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Maternity Statistics

The American public now spends about \$1,150,000,000 a year on all types of maternity care—hospitals, physicians' services, et cetera. This figure does not include the value of free maternity care provided by private and governmental sources.

The average maternity patient today makes about 10 prenatal visits to her physician, stays about 4.5 days in a hospital at delivery, and spends \$272 for all hospital, medical, and similar services used during her pregnancy.—*Health Information Foundation.*

Atheroma and Thrombosis

Major Threats to Our Health Today

Paul D. White, M.D.

Boston, Massachusetts

IT is a pleasure to present a summary of my recent thoughts and experiences related to the vital question of atheroma and thrombosis, that is, diseases of the arterial wall which are major threats to our health today.

Atherosclerosis and thrombosis are two different problems unless we accept the thesis that all atherosclerosis is based on previous thrombotic processes as presented by several investigators of the past and particularly of late by Professor Duguid. Similarly, I regard hypertension as an abnormality distinct from atherosclerosis although hypertension undoubtedly is an aggravating factor and marked atherosclerosis in older people can produce systolic hypertension by the establishment of a full pulse pressure due to inelasticity of the major arteries. My current belief is that the chief hazard to our health today is that of the atherosclerosis itself although I quite agree that superimposed thrombosis, blocking any one of a number of vessels such as the coronary, the internal carotid, the renal, or the iliac can have very serious consequences. At least two-thirds of the cases of sudden death encountered by Dr. Milton Helpert during his long experience in the Coroner's Office in New York City showed extensive coronary atherosclerosis with no fresh thrombosis. A minority do show thrombi. In other words, one can die of angina pectoris without an actual fresh occlusion. I shall, therefore, base my remarks today primarily on the atherosclerotic lesion and its clinical significance and have less to say about the complicating or admittedly serious thrombosis that is superimposed. Nor shall I have much of anything to say about the hemorrhages in the coronary intima or atheromatous plaques long ago described as common by Paterson of London, Ontario, and recently confirmed by Helpert and his associates in New York.

Presented at the Sixth Conference on Cardiology in Ancona, Italy, April 12, 1960, and at the Annual Session of the Michigan State Medical Society, Detroit, September, 1960.

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June, 1961

I wish to quote at the beginning of this discourse from Shakespeare and later from Lancisi. In *As You Like It*, Act II, Scene VII, Jacques in the forest, where a table is set, speaks as follows in answer to the Duke's statement of—

Thou seest we are not all alone unhappy:
This wide and universal theatre
Presents more woeful pageants than the scene
Wherein we play.

Jac. All the world's a stage,
and all the men and women merely players;
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages. At first the infant,
Mewling and puking in the nurse's arms,
Then the whining school-boy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school. And then the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow. Then a soldier,
Full of strange oaths, and bearded like the pard,
Jealous in honour, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth. And then the justice,
In fair round belly with good capon lined,
With eyes severe and beard of formal cut,
Full of wise saws and modern instances;
And so he plays his part. The sixth age shifts
Into the lean and slipper'd pantaloons,
With spectacles on nose and pouch on side,
His youthful hose, well saved, a world too wide
For his shrunk shank; and his big manly voice,
Turning again toward childish treble, pipes
and whistles in his sound. Last scene of all,
That ends this strange eventful history
Is second childishness and mere oblivion,
Sans teeth, sans eyes, sans taste, sans everything.

The Author

PAUL D. WHITE,
M.D.



In Shakespeare's day, life was short. Although we know not the actual ages in years to which he assigned these seven periods of life, we may guess that they were short in time. The expectation of life was very limited, probably not much over twenty years, and men and women were already old at forty. In fact, 250 years after Shakespeare, which would be about 100 years ago, a woman died at forty-five in a ward of the Massachusetts General Hospital and the only diagnosis on the record at that time, as I have read myself was "old age." We know now that one does not die of old age. I myself have always found some adequate cause, such as would be noted in younger people, for example, pneumonia, severe coronary atherosclerosis, cerebral vascular lesion, rupture of an abdominal aortic aneurysm, and many other events of the sort. Let me guess that Shakespeare meant that an infant or young child, that is, the first age of man, might extend from birth to the age of five, the second period, that of the whining school boy, from five to fifteen, the third age that of the lover from fifteen to twenty-five, the fourth that of the soldier from twenty-five to thirty-five, the fifth that of the judge, that is, an experienced professional man, from thirty-five to forty-five. Quite likely the judge in his early forties "in fair round belly with good capon lined" had a fair amount of atherosclerosis which may not have allowed him to survive into the sixth and seventh ages. From forty-five to fifty-five we come to the "lean and slipper'd pantaloons," and finally at sixty second childhood. This division of years is a probability, not a certainty.

Today with the great extension of life, including not only the average expectation which is about seventy instead of thirty as in Shakespeare's time and forty (plus or minus) a hundred years ago, we know that many healthy persons are active in the sixties, seventies, and eighties. Rarely is pneumonia any more the old man's friend although a patient of mine, aged 107½, who was quite healthy as to his heart and cerebral condition, unfortunately did die of pneumonia which had threatened to kill him 105 years earlier when he was but an infant.

I would like to paraphrase Shakespeare's seven ages of man by setting up my own subdivision of life, namely five periods of twenty years each, which I feel quite sure might well be our goal perhaps within a generation and, I certainly hope, not much later. I would divide life into five periods of twenty years each, the first from birth to twenty, that of youth. Once upon a time this was the terrible time of life and actors on the stage in these two decades died of

infections right and left. Even when I was a medical student and an intern in the hospital and for a few years afterwards, the infant and childhood mortality was very high. Babies, whom I helped to take care of in 1911, died like flies, chiefly of dysentery before the pasteurization of milk. Children died of diphtheria. I myself had it but fortunately was rescued by antitoxin. Smallpox still occurred. My own father almost died of smallpox in 1881 in London and he had typhoid fever three times during his years of family practice. I myself escaped typhoid but it was still so current that our wards were full of it every fall. There was no room in the hospitals for any cardiovascular patient or anybody with cancer. Meningitis, empyema, and mastoiditis were constant emergencies and the toll was frightful. Just to think back on those days is like redreaming a nightmare. The young doctors today cannot imagine what we faced. We had a good deal of malignant endocarditis, that is, subacute bacterial endocarditis, and it was 99 per cent fatal. Tuberculosis led the list in mortality. We didn't have any cholera, to be sure, although my own father's mother had died of it on Bunker Hill in Charlestown in 1860 in her very early twenties when father was still a young infant.

Henry Christian, who was our Professor of Medicine, when I was in medical school, gave his first six lectures in the theory and practice of medicine on typhoid fever practically verbatim from the first chapter of Osler's textbook, the idea being that if we knew this infection we knew medicine. Today the first six lectures might well be given on the theory that if we know atherosclerosis we know medicine, but we certainly hope that a generation from now, this too may be in large part past history, at least in youth and middle age. The challenge is here. There is no reason why, having accomplished what we have in the control of infections, we may not accomplish still more in the control of the current hazards to health which, by the way, include automobile accidents on the road, as well as cancer and cardiovascular disease.

I try to refer nowadays to cardiovascular disease rather than heart disease, underlining the vascular part of the word and emphasizing the fact that most of our serious heart disease is not due to primary heart muscle (myocardial) disease, but rather to vascular disease. This is just as much true of cerebral diseases, diseases of the kidney and other viscera and of the legs. These troubles in major part are due to the same process, atherosclerosis, which affects the intima of all these areas of the circulation. The chief

hazard in the first age period of man today (birth to twenty), as I have outlined, is, so far as I know, that of accidents with infections way down. We haven't abolished them all by any means, but we have gone a long way. Accidents on the road were almost unknown when I was a medical student. It is a ridiculous state of affairs now to allow our young people to slaughter themselves on the roads.

We come now to the second twenty-year period from twenty to forty. These, I call, the critical years today in contrast to those of a generation ago. It is in this period of life when all seems to be going well that atherosclerosis gets going even while the candidates for trouble look so healthy, in fact too healthy, robust, with high color, and symptomless. These are the critical years for countless numbers of males in whom this process of atherosclerosis begins to be laid down. The average male in America settles down at about twenty-five to a life of physical indolence although with often great nervous activity in his profession or business. He has no more time to exercise or to have relaxing recreation of any sort. He has an automobile and can hardly move without it. He has a television set before which he lolls in the evening on return from his office and his wife cooks too well. He puts on a pound or two or three of weight every year during this period and that extra weight is not muscle. When I see him as a patient at the age of forty-five to fifty he is 20 to 30 pounds heavier than he was at twenty-five. I always inquire now of my patients with coronary heart disease at the average age of fifty what their weight was at twenty-five. It is almost invariably true that much weight has been added slowly through the years, though sometimes rapidly during the earlier years soon after marriage. Of course, it isn't the actual fat under the skin to carry around that is important. This probably does not increase the burden on the heart much although it may be uncomfortable when stooping. In fact, it might be good exercise to carry this weight around if there weren't an infiltration into the arterial intima of much of the fat. A few ounces in the wrong place must be very much more harmful than many pounds tucked away under the skin here and there throughout the body. During these decades from twenty to forty there are still infections to guard against, but we no longer have so much the threat of syphilis or so much the recurrence of rheumatic fever from a streptococcus sore throat, or even appendicitis as is evident from a lantern slide that I will quote from shortly. Hypertension may start, perhaps associated with the way of life and quite likely also on a here-

ditary basis, which is incidentally back of much of our early atherosclerosis.

Then we come to the third age of man from forty to sixty which is the middle period of middle life where much of the disease that has been slowly building up becomes apparent by symptoms, signs, or sudden death. Hypertension, coronary atherosclerosis of high degree giving rise to angina pectoris, sudden death, or heart attacks with myocardial infarction, little strokes and big ones too, abnormalities of the circulation to the legs, and cancer are the chief threats through this period of twenty years. Here is the ripening of the hazard that started in the twenties or thirties. It is quite certain that the health in this period in middle age from forty to sixty is largely dependent on what has happened before, much less in childhood, that is, before twenty, than in the period from twenty to forty. It is quite obvious that we must start a campaign for "middle aged fitness." Most of our efforts have been directed to our youth, and quite rightly, and what has been done for them has been very important. I myself belong to the President's Council for Youth Fitness, but this is only a beginning. Much more important is now a campaign for *middle aged fitness* and I would like to promote this for the sake of improvement in fitness in middle age by the application of the measures about which we know a good deal already, although we haven't as yet all the answers.

The last two periods of life will also be vastly improved by this program and the male will at last have a chance to begin to catch up with the female in expected longevity. At the present time the American male expects to live only to sixty-seven years or a bit more and the female to seventy-three plus. This difference of six years has increased in the last generation largely due to the earlier hazards in middle age, chiefly atherosclerosis which affects the male so far as the coronary arteries are concerned twenty-four times more often than the female under the age of forty, about five times more in the forties, and about twice more in the fifties. We must make every effort to change the present inequality of these ages and the great surplus of widows over widowers in the middle of the later period of middle age which I would put from sixty to eighty.

Finally, we come to old age from eighty to 100 which can be much healthier if we can forestall some of the progressive changes in the intima of the coronary and other vital arteries earlier in life and if we can avoid hypertension and some of the other ills, including cancer of course, that strike middle-aged

persons. In addition to the prolongation of life we have the problem of maintaining health, that is, of adding life to years as well as years to life. It is in general true that the longer we can keep people living the more useful they can be. It is absurd to require retirement in the sixties. Most people, especially in the future, will still be very useful in the seventies and well enough to carry on quite vigorously both mentally and physically. There is no reason why a man of seventy to eighty should not continue to shovel snow if he is well, perhaps at not quite so fast a tempo. We might aim for 100 per cent mortality from coronary atherosclerosis if it kills quickly at the age of 100 during the night, while the victim is asleep without any illness or incapacity prior to that time. This would mean the cancellation of the serious infections, of cancer, of accidents, of war, and many other ills. It will be a fine and perchance a final goal.

Now let me quote from a translation of Lancisi's preface and a bit of his second volume on *De Subitaneis Mortibus*, that is, on Sudden Deaths, a remarkably interesting forecast of what we see and think today.

At Rome, in the summer, autumn and winter of 1705 down to the spring equinox of 1706, were many sudden deaths. The populace as they do in a Panic, invented a number of explanations: the poor quality of the tobacco; exhalations from the earth after recent earthquakes; inferior chocolate, a mysterious poison (virus) in the air. Pope Clement XI turned, as he ought, to spiritual remedies and a special liturgy, but uniting prudence and piety, appointed in January, 1706 a committee of investigation and ordered the head physician of the Medical College at Rome to have some of the bodies dissected. Lancisi was appointed head of the Commission to report to His Holiness; Cardinal Pallavicini, the Governor of Rome, gave all possible assistance and the experiments were made in a public theatre. By means of such dissections and other observations which Lancisi now publishes he arrived at certain conclusions. Meanwhile others have published dissertations in Italian and Latin, meritorious as far as they go, but these men lacked my opportunities. First I shall deal with sudden deaths in general, a subject of late neglected, and in my second volume shall discuss whether this disease was of a universal or a particular, or, as I believe, a mixed type. I shall add some anatomic discussion. May the Reader enjoy it.

So wrote Lancisi* in the preface of his book *De Subitaneis Mortibus* in the year 1707, 252 years ago. He continued discussing possible causes of sudden death along this same vein in Chapter 1 of Book II:

Was the cause simple (not complicated) and universal, or particular and mixed? First, was the cause particular in individual cases? We know that in certain years or seasons, death comes to men, yes and to animals such as cattle and goats, from a pestilential condition of the air or a taint in air or water, or from a scarcity or defect in their pasture, and that it rages without warning. So sang Fracastoro in his golden verses:

Sometimes tis only beasts that are chastised,
Many or only some thereof, I do remember
One summer's baleful heat; an autumn followed
With soaking rain; the south wind blew continually,
Then every kind of goat, but of all living things
The goats alone, did perish.

But I consider it more likely that the cause of the sudden deaths at Rome was not single and absolutely common to all, but that in the majority of cases there was a special cause for each case. I conclude this from the external symptoms, and my conviction was only strengthened by experiments. For it will be shown in the following pages that the peculiar and principal cause of premature death in each case was the presence of certain seeds, which were produced gradually and were finally called into action on a sudden; as Hippocrates says: 'Diseases do not come to men suddenly but are collected and pile up little by little.' No need to blame the tobacco; since some whose nostrils were never defiled by that dust died suddenly. Or exhalations from earthquakes, since many who escaped death lived where there had been most earthquakes. Nor was the chocolate to blame, for men like Dr. Placentius, an octogenarian, or myself, accustomed to drink it as much as twice a day for thirty years either escaped altogether or had only light symptoms. On the other hand, many who never tasted it died suddenly. Nor was it a case of undetected poison in the air, for when like augurs we inspected the entrails, we found clear and well known causes for the disease.

Before the Pope ordered us to dissect, there was evidence for the theory that the cause of death was particular and not universal; in some cases there were symptoms of rupture of the blood carrying canal which had been weakened by a varix or an aneurism in the chest or abdomen. Many died of violent apoplexy due to stoppage or effusion of blood in the brain; others of a violent spasm of the heart or paralysis or obstruction of the passages of the heart and of the large arteries. Thus was hindered the passage of the blood from the heart into the lungs and the brain, and so the vital and reciprocal communication of those organs was suddenly cut off. But I must repeat again and again, that so far as I know, every one of those who died suddenly had long suffered from some disease of the fluids, the intestines, or at least of the blood vessels. . . . Therefore, to the best of my belief, these sudden deaths did not come to the healthy, but nearly always to those who had long suffered from poor health. For them this was a sort of foaming over of human nature, or an unfavorable crisis arose, with men who had long been either openly or secretly in poor health.

These remarkable observations of Lancisi were unfortunately never followed up, otherwise much more

*Translation by Wilmer Cave Wright (unpublished—in manuscript), kindness of New York Academy of Medicine.

interest would have been developed in the evolution of the processes of disease which lead to sudden death, including in particular atherosclerosis which must have been seen although it was not well described either grossly or with the help of the primitive microscopes of the day except in one case report in the second edition of Bonet's *Sepulchretus* in 1700. It is quite obvious from our experience of late years, as well as occasional notations by the more astute observers like Lancisi, that neither sudden death nor angina pectoris nor coronary thrombosis comes suddenly to a healthy man. The evolution of the process is a slow one, taking years at least and perhaps decades before symptoms or signs develop.

Can we, as seems quite possible, by the newer techniques of angiocardiology and other simpler methods, diagnose serious degrees of atherosclerosis at a much earlier stage than we are now able to identify them? Even if we should do so, much more would have to be done before corrective curative measures might be applied. Therefore, it seems obvious to me, and I am sure to all of you, that our chief effort in research, basic and clinical, must be directed to a more intensive study of the initial processes, physical, chemical, and hereditary in order to learn how we may counteract them.

Our task is two-fold: that of the identification of the candidate for serious trouble early in life or in middle age, with a study not only of the family history but also of characteristics which we have believed to be of some importance, such as body build, and blood chemical findings like hyperglycemia and hypercholesterolemia. Although we should attempt to make some effort to protect the whole population, nevertheless the candidates are the ones we should concentrate on first. Such candidates should be identified if possible in their early years even perhaps in their teens, at any rate not later than their twenties. For such candidates and perhaps for all of us, simple measures may be advisable even now before we have all the proof, such measures as the avoidance of any

gain in weight after the age of twenty-five, the reduction of the animal fat content of our very rich American diet, and the institution of programs of regular exercise and relaxation of other sort too with an effort to neutralizing at least somewhat the emotional stress that is so characteristic of current urban life.

If we can also discover in the course of our researches, which is quite possible, magical remedies in the form of chemical substances to counteract hypercholesterolemia and inherited enzyme defects, we may not need to carry out so much the other protective measures even though they seem very reasonable to us now. And while we are busy with our researches on these problems, we should try to correct the erroneous opinions and practices of countless individuals in this country who are still inclined to blame hard work as the primary cause of atherosclerosis and its complications.

Just one word about hard work. It is true that one can get very tired both physically and mentally from hard work, but I have yet to find a man or woman, otherwise healthy, who, from hard work alone, has become ill provided he or she carried out a sensible program of life, avoiding the hazards which I have first mentioned above.

In conclusion, may I express optimism about the future results of our researches, physical, chemical, hereditary, pathological, and clinical on atherosclerosis, especially of the premature varieties. Within another generation, in fact I believe within a decade, with the present increasing tempo of vigorous research, we should have some definitive answers which will allow us to protect our men and to expand increasingly the expectation of a long and healthy life.

Again, as I have frequently done in the past, I would like to end with another quotation from Shakespeare:

Our remedies oft in ourselves do lie, which we ascribe to Heaven.

Cancer Study Sets Available

The Michigan Cancer Registry has available for loan a group of study sets consisting of histologic slides, chiefly of various types of neoplasms. These sets are available without charge to all interested physicians in Michigan. A deposit

is required and this will be refunded subject to deductions for loss or breakage. For further information, write to Director, Michigan Cancer Registry, 4811 John R Street, Detroit 1, Michigan.

Malabsorptive Syndromes

Considerations in Diagnosis And Treatment

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Chicago, Illinois

THE FUNCTIONS of the gastrointestinal tract include motility, secretion, digestion, absorption, storage and excretion. All of the other functions are largely ancillary to the basic process of absorption.

Recently much interest has been centered about the physiology of absorption and the defects or dysfunctions responsible for malabsorption.^{1,2,3} This increased interest in absorption stems from a number of factors.⁴ New methods have become available for the study of absorptive defects. These included the development of a rapid method for the determination of fecal fat, the use of radioiodine labeled "fat," the use of D-xylose for quantitating defects in carbohydrate absorption, the determination of plasma glycine levels after gelatin feeding as a test for pancreatic function and the techniques for obtaining biopsies of the small intestine mucosa safely and relatively simply. Many of these diagnostic techniques have become available in clinical practice. Physicians have become aware of an increased incidence of malabsorptive syndromes. The purpose of this report is to define and classify the malabsorptive syndromes; to review the value and

limitations of the various tests of absorptive capacity in terms of reliability, simplicity and availability in clinical practice and to discuss the diagnostic features and treatment of the malabsorptive syndrome.

Classification

The malabsorptive syndromes are characterized by a group of symptoms which develop when the usual constituents of the diet are not absorbed in the normal manner. Malabsorption may result either in impaired digestion or faulty absorption. Steatorrhea, the excessive fecal excretion of fat, is a prominent part of many malabsorptive syndromes. The absorptive defect may be limited to a single factor, as in pernicious anemia, or may be broad, as in idiopathic steatorrhea.

A number of classifications for the malabsorptive syndrome have been suggested. Adlersberg divided those disorders into primary and secondary malabsorption.⁵ Primary malabsorption included celiac disease, tropical and nontropical sprue. The remaining cases of malabsorption were termed secondary malabsorption.

Ruffin and Janssen⁶ have emphasized the distinction between impaired digestion with normal absorption and impaired absorption in the presence of normal digestion. A somewhat similar classification has been suggested by Spiro and Friedman.⁷

Volwiler,⁸ in a scholarly discussion of the malabsorptive syndromes, suggested a classification based upon the principal biochemical processes involved in fat digestion and absorption which follows:

- I. Inadequate mixing of food with bile salts and lipase
 - A. Pyloroplasty
 - B. Subtotal gastrectomy
 - C. Total gastrectomy
- II. Inadequate lipolysis—lack of lipase
 - A. Pancreatic insufficiency
 1. Congenital cystic fibrosis of the pancreas
 2. Chronic pancreatitis
 3. Cancer of the pancreas or ampulla
 4. Pancreatic fistula
 5. Protein deficiency

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- III. Inadequate emulsification of fat—lack of bile salts
 - A. Obstructive jaundice
 - B. Severe liver disease
- IV. Primary absorptive defect—small bowel
 - A. Inadequate length of normal surface
 - 1. Surgical resection
 - 2. Internal fistula
 - B. Obstruction of mesenteric lymphatics
 - 1. Lymphoma
 - 2. Carcinoma
 - 3. Whipple's disease
 - 4. Tuberculosis
 - C. Inadequate absorbing surface due to extensive mucosal disease
 - 1. Inflammatory
 - a. Tuberculosis
 - b. Regional enteritis
 - 2. Neoplastic
 - 3. Amyloid infiltration
 - 4. Scleroderma
 - D. Biochemical dysfunction of mucosal cells
 - 1. Celiac disease
 - 2. Sprue
 - 3. Severe starvation
 - 4. Transient dysfunction associated with intestinal infections
 - E. Malabsorption associated with blind loops, diverticula, strictures and surgical anastomoses.

Clinical Manifestations

The clinical manifestations of malabsorption can be considered in terms of the responsible pathophysiological mechanisms. Thus, inadequate absorption may result from the following: (1) inadequate biochemical preparation of the ingested material for absorption; (2) an uncontrolled rate of delivery of the nutrients to the small intestinal lumen; (3) lack of adequate time for contact between the nutrients and a normal intestinal surface; (4) biochemical and/or structural defects of mucosal cells of the small intestine; or (5) competition for the use of ingested nutrients by bacteria under circumstances of unusual intestinal disease which allows bacterial overgrowth in stagnant areas of the gastrointestinal tract.

Steatorrhea is the most striking defect accompanying the broad malabsorptive syndrome. However, malabsorption may be present without any gross evidence of steatorrhea. About 85 per cent of patients with steatorrhea have diarrhea.^{4,9} Other clinical manifestations include hemorrhagic phenomena, tetany, osteomalacia or osteoporosis, malnutrition, edema, amenorrhea, megaloblastic or iron deficiency anemia, glossitis and cheilosis, and peripheral neuritis.

Loss of calories is the most important single aspect of the broad malabsorptive syndromes. Fat represents the major source of high calorie food in the diet. Defective fat absorption may be manifest by weight loss

and malnutrition. Malnutrition leads to depletion of body stores of protein with the development of hypoproteinemia and edema. Protein deficiency results in osteoporosis, pancreatic insufficiency and atrophy of the mucosa of the small intestine. The defect in calcium absorption results in osteomalacia. Iron deficiency anemia, or megaloblastic anemia, or both, may be observed in patients with sprue or celiac disease and in patients following total gastrectomy. Megaloblastic anemia may also follow partial gastrectomy if mucosal atrophy of the remaining stomach is present.¹⁰ A deficiency of vitamin B₁₂ and anemia may result from bacterial or parasitic interference with normal absorption of vitamin B₁₂.¹¹ The same mechanism may be responsible, in part, for the various signs of vitamin deficiency present in patients with sprue.

Absorptive defects, if severe, extend to carbohydrates, electrolytes, water soluble vitamins and water. Peripheral neuritis, glossitis and cheilosis, result from deficiency of the water soluble vitamins. Tetany results from impaired absorption of both vitamin D and calcium. Hemorrhagic phenomena may result from impaired absorption of vitamin K. The ocular and skin changes of vitamin A deficiency may be present.

Special Diagnostic Studies

The diagnostic approach to the patient with malabsorption should begin with a complete history and physical examination. Particular inquiry should be directed to determining the character and frequency of the stools. Although a few patients will have normal bowel habits, most patients with the broad malabsorptive syndrome have diarrhea. Diarrhea may be manifest by an increased frequency of bowel movements, but is always characterized by an increased volume of the stool for twenty-four hours. A history of prior gastrointestinal surgery is important. The presence of abdominal pain and diabetes in conjunction with steatorrhea may suggest pancreatic insufficiency. Fever, abdominal pain and arthritis are suggestive of Whipple's disease.

The physical examination should be complete. Particular attention should be paid to the abdominal findings, signs of vitamin deficiencies or neurologic defects. A positive Trousseau test or spoke wheel cataracts are signs of hypocalcemia. Excessive intraluminal fluid in the small bowel in patients with sprue may cause abdominal distention out of proportion to the degree of tympany.¹²

Certain laboratory examinations are indicated in all patients suspected of having malabsorption. These in-

clude examination of the blood smear for anemia, evidence of macrocytosis or iron deficiency, determination of the prothrombin time and the serum albumin and globulin concentrations. Patients with prolonged steatorrhea should have determinations of the serum calcium, phosphorus and alkaline phosphatase.

A radiologic examination of the small bowel is indicated in all patients with suspected steatorrhea. The classic changes consist of dilatation, segmentation, abnormal motility, the moulage sign and an increase in intraluminal fluid. These changes are typical of patients with sprue,¹³ but they may be found to a lesser degree in some of the other malabsorptive syndromes. Some of these abnormalities are related to the nature of the opaque medium used. The excessive mucus, produced in response to the increased amount of fatty acids within the bowel lumen, results in precipitation of the barium sulphate. Chemical abnormalities of gastric and small intestinal mucus in some of the malabsorptive syndromes may also influence the roentgen appearance.

If the stools are bulky, foamy, and foul smelling, the diagnosis of steatorrhea may be suspected upon gross examination of the stool. However, the appearance of the stool yields little information as to the nature and degree of the absorptive defect. Gross examination of the stool, although not to be neglected, may be highly unreliable. It is of value if oil, buttery materials, or egg particles are present. The presence of vegetable fibers, such as corn, has no diagnostic significance. Large numbers of undigested muscle fibers can be readily seen microscopically and are common in patients with pancreatic insufficiency.¹⁴

Examination of the stools should include the use of acid hydrolysis of the stool, employing Sudan III and a drop of acetic acid. The mixture is heated briefly and then inspected under the microscope. Fat droplets appear as bright orange globules. More than two to three globules per field are indicative of excess fat in the stool. Some estimates as to the percentage of fat in the stool can be obtained by measuring the size of the globules.¹⁵ Globules larger than 75 microns in diameter are indicative of a significant absorptive defect, and globules of 125 microns in diameter are indicative of a rather severe defect. Interpretation of this test is not easy and requires experience.

Steatorrhea can also be suspected from the consistency of the stool when rubbed between the fingers. The buttery materials in the stool impart a slippery, greasy quality.

Fat Absorption.—For precise investigative work, fecal fat balance studies are necessary. Several methods have been employed to measure fecal fat. A wet extraction method can be used.^{16,17} Less than 90 per cent of ingested fat on a diet containing 60 gm. daily is abnormal.¹⁸ Calculated diets are not required if more than 50 gm. of fat are ingested per day. Between the ranges of 60 and 150 gm. of fat, neither the quantity nor type of fat influences the quantity of fat excreted in the feces.¹⁹ *More than 6 gm. of fat in the stool per day when a patient is on a normal diet is indicative of steatorrhea.* The stools should be collected for at least three days, and preferably longer.

A small quantity of fat is present in the stools of experimental subjects who are on a fat free diet.⁴ Most of this fat is contributed by the rapidly desquamating epithelium of the small bowel,^{8,20} although some may be contributed by secretion of fatty complexes from the blood into the lumen of the bowel.²¹ Intestinal bacteria may synthesize fat under abnormal circumstances.

The weight of the stool is useful in determining the presence or absence of steatorrhea. The normal stool should weigh less than 200 gm. per twenty-four hours; stools from patients with absorptive defects usually weigh much more.

Although it is agreed that the fat balance technique is the most reliable approach for the quantitative assessment of steatorrhea, other simpler screening procedures have been proposed. Nile blue added to oleates in the presence of Na_2CO_3 results in a blue color. The Nile blue reaction correlates reasonably well with the degree of fat present in the stool determined by chemical analysis.²²

After ingestion of vitamin A, the vitamin A level of blood of normal individuals increases rapidly. The vitamin A tolerance is a simple method for measuring rate of absorption of fatty materials. Low fasting vitamin A levels may be observed in patients with liver disease, and severe hepatic damage is often associated with a flat vitamin A tolerance curve. However, a flat vitamin A tolerance curve is usually indicative of impaired absorption, although flat curves may be found in normal patients. The test is of little value in quantitating the degree of steatorrhea in patients after gastrectomy.²³ Despite these limitations, the absorption of Vitamin A from an oily medium tends to parallel the degree of fat absorption as measured by fat balance studies,¹⁸ and has been found to be of value as a screening test for steatorrhea.

The plasma carotene of fasting patients is also useful as a screening test for steatorrhea.²⁴ This determination is simpler than the vitamin A tolerance test, but has the same limitations as the former test, namely, it is of little value in patients with post-gastrectomy steatorrhea, or liver disease. The mean normal value is 123 gamma. Determinations between 30 and 70 micrograms are evidence of moderate depletion of carotene stores, and values below 30 micrograms are indicative of severe depletion. A carotene tolerance test has been proposed, which appears to avoid the problem of overlapping of the fasting values between normal subjects and patients with malabsorption. After administration of 15,000 units of carotene orally, three times a day for three days, no overlap was observed in the carotene values between the normal and steatorrheic subjects.²⁵ The rise in carotene values in normal subjects was always more than 45 gamma; in patients with steatorrhea it was always less than 29 gamma.²⁵

Radioiodine labelled triolein and oleic acid have been used in the study of fat absorption. Triolein is an 18 carbon neutral fat possessing one double bond. The radioiodine is firmly attached to this bond and is not split off within the lumen of the intestine.

Lugol's solution is administered prior to the administration of the labelled fat. Blood radioactivity is measured at three, five and seven hours. The stools are collected for three to five days. This technique measures the rate of fat absorption and is affected by the rate of gastric evacuation^{26,27} and the nature of the accompanying meal.²⁷ Ruffin et al,²⁸ using labelled triolein in a 48 per cent peanut oil emulsion, considered an average of 8 per cent in the three blood samples as normal. The rapidity of absorption is dependent to a considerable degree on the nature of the accompanying meal. The administration of radioiodine labelled triolein in milk results in higher blood levels, more rapid absorption and is less likely to produce nausea and gastric retention than the use of triolein in the 48 per cent peanut oil emulsion.²⁷

The differential in absorption between triolein and oleic acid is useful in the diagnosis of pancreatic insufficiency. In this clinical situation the absorption of triolein is impaired while oleic acid is absorbed normally.

If one depends solely on blood levels, one measures the rate of absorption rather than the actual amount of fat absorbed. As with the vitamin A tolerance test, a poorer correlation exists between the degree of steatorrhea as measured by fecal fat excretion and radioiodine labelled triolein in patients with regional

enteritis and following gastrectomy.^{4,23} Further, the finding of normal blood levels of radioactivity does not exclude the existence of steatorrhea.^{29,30} A good correlation does exist between the levels of fecal radioactivity during a seventy-two-hour collection period and fecal fat excretion as measured by chemical means. The normal values of fecal radioactivity vary from 0.4 per cent with a mean of 2.5 per cent.

Comparative studies indicate that use of radioiodine labelled fat is a valid method.^{31,32} The addition of some indicator substance to the stool is of value. Both blood and fecal levels should be measured. Fecal levels are the more important of the two. However, abnormally high fecal values may result in contamination of the stool specimen with urine containing the iodine label. Abnormally low values may result from gastric retention or motor disorders affecting the small bowel, which result in retention of the labelled fat within the intestine beyond the collection period.

Some investigators have used the urinary I¹³¹ excretion as an index of the degree of absorption of the labelled fat, and recently, measurement of urinary iodine following Lipidol ingestion has been suggested as a screening test for absorptive disorders.

Another isotopic technique utilizes vitamin B₁₂ labelled with radiocobalt. Intestinal absorption can be measured by the fecal excretion test, the urinary flushing technique, measurement of hepatic uptake, and determination of radio-activity of the serum following oral administration of the labelled vitamin. Impaired absorption has been observed in patients with tropical sprue, sprue in relapse, patients with total and subtotal gastrectomy, pernicious anemia, regional enteritis, and patients with agammaglobulinemia and cystic fibrosis of the pancreas.

Intestinal absorption can also be studied by measuring the radioactivity of expired air sixty minutes after administration of radiocarbon labelled octonoic acid or trioctonate. The radioactivity is decreased for both substances in patients with sprue.⁴ Patients with pancreatic insufficiency have normal values following administration of octonoic acid, but decreased radioactivity following administration of trioctonate.

Carbohydrate Absorption.—The D-xylose tolerance test is the most useful parameter for assessing carbohydrate absorption.^{33,34} D-xylose is apparently passively and actively absorbed and is not metabolized except for a small fraction. Measurement of the urinary excretion for five hours following administra-

tion of 25 gm. of D-xylose orally is usually employed. Normally, more than 5 gm. of the D-xylose are recovered in the urine during this period. Patients without absorptive defects beyond the age of sixty-five may have urinary values in the abnormal range (2.9 gm.).³⁵ Low values are obtained in patients with renal disease and congestive heart failure despite normal intestinal absorption. Decreased urinary excretion secondary to malabsorption is observed in patients with sprue, regional enteritis, following partial gastrectomy or loss of absorptive surface, in the presence of multiple small diverticula of the jejunum, and in patients with the Zollinger-Ellison syndrome. D-xylose excretion is usually normal in patients with pancreatic insufficiency.

Protein Absorption.—Daily fecal nitrogen determined by nitrogen balance technique varies between 1.2 and 1.7 gm.³⁶ Marked azotorrhea is present in patients with diffuse pancreatic disease and nontropical sprue. A five-fold increase in plasma glycine in 2.5 hours can be demonstrated in normal subjects following oral administration of gelatin.⁴ Patients with cystic fibrosis of the pancreas have less than a 2.5-fold increase in fasting levels during this same time period.

Diagnosis of Pancreatic Insufficiency.—The diagnosis of pancreatic insufficiency presents many problems. The most reliable method utilizes measurement of the output of the pancreas into the duodenum during a control period and following administration of secretin and pancreozymin.^{37,38} Serum trypsin levels have been reported to be elevated in the presence of pancreatic disease. We have been unable to confirm the value of this test. Although serum leucine aminopeptidase has been reported to be elevated in patients with carcinoma of the pancreas, the more recent reports^{39,40} have questioned the specificity of this test.

Morphologic Diagnosis.—Transoral small bowel biopsies are of real value in diagnosis.⁴¹ This technique is excellent for the verification of the diagnosis of nontropical sprue, celiac disease and Whipple's disease. The diagnosis of Whipple's disease may also be made by biopsy of involved peripheral lymph nodes or other tissues.

Morphologic confirmation of the clinical diagnosis also can be obtained at exploratory laparotomy. Laparotomy is indicated in patients with suspected pancreatic disease and the blind loop, stricture or massive diverticula syndrome.

Malabsorption Syndromes

The primary malabsorptive syndromes are decreasing in frequency. Whereas sprue was relatively frequent thirty years ago, it is now infrequent. On the other hand, the secondary malabsorptive syndromes are being recognized more frequently. Common causes include: malabsorption secondary to gastrointestinal surgery or loss of absorptive surface; diffuse pancreatic disease; regional enteritis and enterocolitis; and hepatobiliary disease. Uncommon causes of the secondary malabsorptive syndromes include: lymphoma, Hodgkin's disease and tuberculosis; Whipple's disease; scleroderma and amyloid disease; the intestinal fistula, blind loop and massive small intestinal diverticula syndrome; the Zollinger-Ellison syndrome; the carcinoid syndrome; extensive pneumatosis cystoides intestinalis; radiation injury; Henock-Schoenlein purpura; agammaglobulinemia; pseudohypoparathyroidism; diabetic neuropathy, and steatorrhea following neomycin administration or administration of large doses of antacids.

Primary Malabsorptive Syndromes.—Diarrhea, wasting, abdominal distress, segmentation of barium sulphate in the small bowel on roentgen study, absence of postabsorptive systemic hyperlipemia, a low serum carotene, a flat carbohydrate tolerance curve, anemia and signs of vitamin deficiency are characteristic of this syndrome. Although tropical sprue, nontropical sprue and celiac disease may be varieties of the same metabolic disorder, not all students are in agreement.⁴

Sprue is thought to be a genetically determined metabolic disorder. Its manifestations may appear at any period of life.

The initial clinical symptoms of patients with celiac disease usually occur between the ages of the 6th and 24th months. The clinical features of patients with celiac disease may wax and wane. These patients have evidence of absorptive defects even when they are able to tolerate normal diets. Approximately one-half of patients with idiopathic steatorrhea have evidence of having had celiac disease in childhood.⁴²

Although a disturbance in bowel habits is present in about 80 per cent of patients with idiopathic steatorrhea, frank diarrhea is present in only about half of the patients. The stools are paler than normal, bulky, offensive and sometimes frothy. Accompanying symptoms include flatulence and indigestion. The appetite may vary from excessive to poor.

The clinical features of patients with tropical sprue vary somewhat from those presented by patients with

nontropical sprue. Tropical sprue tends to occur in epidemic outbreaks, at specific seasons of the year, and in people living under the same environmental conditions.

Characteristic abnormalities in the small intestinal mucosa have been demonstrated in patients with nontropical sprue.⁴³ The villi are shortened and club shaped. Goblet cells are increased, and the muscularis is infiltrated by inflammatory cells.⁴³

Fecal fat excretion in patients with sprue is proportional to the amount of fat ingested. Fats containing large quantities of long chain fatty acids are less well tolerated in diets containing short chain fatty acids. The absorptive defects in sprue affect virtually all food substances.

The D-xylose tolerance test and the serum carotene determination are useful screening procedures. The pattern on roentgen study of the small bowel is characteristic in 70 per cent of patients.¹³

Many patients with sprue achieve virtually complete relief from their signs and symptoms when treated with a gluten free diet.⁴⁴ Intolerance to gluten is a major factor in the pathogenesis of celiac disease. The mechanism of the gluten induced enteropathy remains unclear. Further, return of the intestinal mucosa to normal following prolonged use of the gluten free diet has not been convincingly demonstrated.

The gluten-gliadin free diet excludes all cereals except corn and rice. Foods which contain wheat, rye, barley and oats in any form must be excluded. The foods omitted and allowed on the gluten-gliadin free diet have been listed elsewhere.⁴

Adrenal steroids are useful in patients refractory to the gluten-gliadin free diet. The possible complications relating to long term steroid therapy should be kept in mind. Vitamins and minerals should be administered as required. Tropical sprue usually responds well to administration of folic acid and to vitamin B₁₂.

Malabsorption Secondary to Gastrointestinal Surgery or Loss of Absorptive Surface.—The absorptive defects of iatrogenic origin are the most common, although they are frequently not of sufficient magnitude to prevent good nutrition if the food intake is adequate.

Steatorrhea is a constant accompaniment of total or near total gastrectomy; fat absorption varies between 30 and 70 per cent.⁴⁵ Patients with Hoffmeister 70 per cent resection without vagotomy had a mean fat absorption of 79.9 per cent.⁴⁶ Increasing the extent

of the resection from 70 to 75 per cent decreases fat absorption to 71 per cent. Removal of 85 per cent of the stomach resulted in fat absorption of 61 per cent. Fecal fat losses are less following the Billroth I resection than following the Billroth II resection.⁴⁷

Part of the decrease in absorption following gastric resection with a gastrojejunostomy or gastroenterostomy is accounted for by lack of stimulation of the pancreas. Partially digested breakdown products of foods, which bypass the pancreas in the Billroth II procedure, represent the major stimulus for pancreatic secretion. Improvement in nutrition can be obtained by frequent small feedings and supplementation with potent pancreatic replacement therapy (Viokase* and Cotazym**).

Resection of a significant portion of the small bowel constitutes a less common but more serious cause of malabsorption. The degree of steatorrhea is directly proportional to the amount of small bowel removed. Diarrhea, significant weight loss and vomiting are common. The stools contain undigested food particles. The diagnosis can be made on roentgen study. The same symptoms and clinical signs follow the inadvertent performance of a gastroileostomy. A similar sequence of events occurs in patients with gastroenterocolic fistula.

Carbohydrate absorption is essentially normal in patients with three or more feet of small bowel. However, approximately 25 per cent of the ingested protein is lost in the stool, and the fat defect is more serious.⁴

Prolonged steroid administration may be of value in treatment.

Diffuse Pancreatic Disease.—Absorptive defects are almost always present in patients with diffuse pancreatic disease. When pancreatic juice is permanently excluded from the duodenum of experimental animals, the stools increase in size and contain excessive amounts of fat and nitrogen. Functional abnormalities of pancreatic secretion account, in part, for the steatorrhea which follows gastric surgery and in patients with diabetic diarrhea.

Cystic fibrosis of the pancreas occurs in children but is an uncommon cause for steatorrhea in adults. Formerly, most of the children died before they reached the twentieth year. The use of antibiotics and potent pancreatic enzyme supplements has en-

*Viobin Corp., Monticello, Illinois.

**Organon, Inc., West Orange, New Jersey.

abled some of these children to live into adulthood. The sweat electrolyte test is positive in patients with cystic fibrosis of the pancreas. The increase in the chloride ion in the sweat can be detected by the use of Fibros paper.[†]

Establishing that steatorrhea is of pancreatic origin depends upon demonstrating virtual absence of proteolytic and lipolytic enzymes in the duodenal juice, a positive secretin and pancreozymin test and improvement of fecal excretion of dietary fat and nitrogen following administration of potent pancreatic supplements (Viokase or Cotazym). The differential absorption between labelled oleic acid and triolein also is of value in diagnosis. The gelatin film test is of little value because of the presence of fecal bacteria capable of digesting the gelatin. Exploratory laparotomy may be necessary to establish diagnosis of chronic pancreatitis and to rule out the presence of pancreatic carcinoma.

Treatment for pancreatic insufficiency has been greatly improved with the availability of potent pancreatic supplements. Viokase is administered in dosage of 4 to 8 gm. per day. The medication is more effective if the daily dose is divided into hourly increments. The dose of Cotazym varies between 8-12,000 units daily given in divided doses of four to six capsules. Clinical improvement is manifested by control of steatorrhea, gain in weight and a feeling of well-being.

Regional Enteritis and Enterocolitis.—Steatorrhea occurs in patients with extensive enteritis and enterocolitis.^{4,20,48} The absorptive defect may not be recognized from gross inspection of the stool. The roentgen findings are of value in establishing the diagnosis. Abnormalities in absorption may be demonstrated for fats and carbohydrates. If a fistula develops between the involved small bowel and the colon, the absorptive defect becomes more severe.

Management is directed primarily to the enteritis, e.g., use of Azulfidine[§] and adrenal steroids.

Liver and Biliary Disease.—Absorptive defects develop secondary to severe liver disease and during the course of prolonged obstructive jaundice. Fecal fat studies (chemical or isotopic) are necessary to quantitate the degree of steatorrhea. Tolerance tests yield misleading information.

If the malabsorption is the result of a fistula or chronic obstruction of the biliary tree, surgical treatment should be recommended. Calcium and the fat soluble vitamins should be provided in adequate amounts.

Uncommon Causes of Malabsorption.—Lymphoma, Hodgkin's disease, carcinoma and tuberculosis result in occlusion of the mesenteric lymphatics. A sprue-like syndrome which does not respond to a gluten free diet and without characteristic biopsy findings of Whipple's disease should raise the question of the presence of a lymphoma or some other neoplasm.

Intestinal tuberculosis has largely disappeared from areas where pasteurized milk is in common use. Surgical resection of the involved area may add to their absorptive difficulty. However, resection of a small stricture in this area may be curative.

More than 200 cases of Whipple's disease have been described in this country during the past fifty years. This disorder is characterized by abdominal pain, fever, steatorrhea, malnutrition, and arthritis. Pancreatic function is normal. The roentgen studies are fairly characteristic.

All of the manifestations observed in the malabsorptive syndromes may be observed in patients with Whipple's disease. Although favorable, clinical and biochemical remissions have accompanied the use of prolonged adrenal steroid therapy, the ultimate prognosis remains poor. A few patients have had prolonged remissions without the use of steroids.

Infiltrative diseases, such as scleroderma and amyloid disease, may result in steatorrhea. The roentgen alterations accompanying scleroderma include dilatation of the small intestine. Similar roentgen findings have been observed in patients with amyloid disease. The diagnosis of both these conditions usually depends upon obtaining a positive biopsy. The treatment is that of the primary disease.

Steatorrhea may be found in patients with small intestinal fistula, the blind loop syndrome, massive small intestinal diverticulosis and lateral anastomosis of the small bowel. Vitamin deficiencies and megaloblastic anemia are common. An alteration in the fecal flora may contribute to the clinical features. Oxytetracycline therapy temporarily abolishes the steatorrhea. Surgical removal of the fistula, blind loop or intestinal diverticula is curative.

Patients with the Zollinger-Ellison syndrome may have steatorrhea. This is thought to be related to an alteration in the flora of the upper small bowel as a

[†]Consolidated Laboratories, Inc., Chicago Heights, Illinois.

[§]Pharmacia Laboratories, Inc., New York.

result of the excess gastric acid secretion. Correction of the hypersecretion results in improved absorption.

The hypermotility of the small bowel in patients with carcinoid tumors may result in absorptive defects. A sprue-like syndrome also has been reported secondary to extensive submucosal *pneumatosis cystoides intestinalis* in which gas filled cysts are found in the small bowel. The diagnosis may be suspected on roentgen study.

Transient malabsorption accompanies radiation therapy to the abdomen. If the changes are extensive a permanent absorptive defect may occur.

Absorptive defects can occur in patients with purpura. The roentgen findings resemble those accompanying regional enteritis. Abnormalities of the mucosa have been demonstrated on small bowel biopsy. Malabsorption has also been observed in patients with *agammaglobulinemia* and *pseudohypoparathyroidism*.

An experimental form of the malabsorption syndrome has been produced in patients who are given 12 gm. of Neomycin daily. These patients have steatorrhea. Cessation of Neomycin therapy results in cure of the steatorrhea and return of their abnormal absorption test to normal. Large doses of antacids may also result in a modest degree of steatorrhea.

Summary

Absorption is the basic function of the gastrointestinal tract. Despite recent intensive study, many of the factors concerned with absorption remain poorly understood.

With the availability of new diagnostic techniques, an increased incidence and variety of malabsorptive disorders has been recognized. The clinical manifestations may be variable. Diarrhea is present about 85 per cent of the time. The stool is usually increased in volume. Other manifestations include hemorrhagic phenomena, tetany, osteomalacia and/or osteoporosis, malnutrition, edema, amenorrhea, megaloblastic or iron deficiency anemia, glossitis and cheilosis and peripheral neuritis. The most striking absorptive defect accompanying the broad spectrum malabsorptive syndromes is steatorrhea.

Special diagnostic studies include roentgen study of the small bowel, gross examination of the stool, fat balance techniques, use of radioiodine labelled fats, the serum carotene and carotene tolerance tests, the D-xylose test, pancreatic and liver function tests and transoral biopsy of the small intestine. The value and limitations of these tests are discussed in terms of

reliability, simplicity and availability in clinical practice.

The primary malabsorptive syndromes (celiac disease and sprue) are decreasing in frequency. The role of the gluten-free diet and adrenal corticosteroids in treatment is discussed.

The secondary malabsorptive syndromes are being recognized more frequently. Common causes include: malabsorption secondary to gastrointestinal surgery or loss of absorptive surface; diffuse pancreatic disease; regional enteritis or enterocolitis and hepatobiliary disease. Uncommon causes include: lymphoma, Hodgkin's disease and tuberculosis; Whipple's disease; scleroderma and amyloid disease; fistula, blind loop and massive small intestinal diverticula syndromes; the Zollinger-Ellison syndrome; the carcinoid syndrome; extensive *pneumatosis cystoides intestinalis*; radiation injury; Henock-Schoenlein purpura; pseudohypoparathyroidism and malabsorption following administration of large doses of Neomycin and antacids.

The diagnostic features and treatment of these disorders are discussed. Particular attention is paid to the role of pancreatic insufficiency and its treatment with two potent pancreatic extracts (Viokase and Cotazym).

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We know that doctors hesitate to discuss prices or charges with

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their patients but the times have reached a condition now where this is completely necessary, otherwise we are open to the increasingly popular slurs being made upon the profession. For our own protection we should have these understandings with our patients.

Deductible Policies

For several years, deductible policies have been available both in Blue Cross and Blue Shield. Unfortunately, industry was not particularly interested unless all of the employees used the same policy and there were not too many groups wishing only the deductible program. This has been a criticism given to the MMS Board and to various others by enormous numbers of critics, including doctors, who claim the establishment of the deductible policy would solve all our problems.

The MMS Board recently passed a resolution that in all negotiations for Blue Shield coverage, the subscribers be given the option of taking the comprehensive contract or the deductible type. This has been noticed generally in the newspapers and we have mentioned it in *THE JOURNAL*. The Insurance Commissioner insisted that deductible be stressed as another item in the controls he seeks over Blue Shield administration. There is much discussion as to which is ultimately the most economical or the most suitable.

Deductible policies seem to be, in a measure at least, more saleable. Automobile insurance companies have found that they could not exist on a full coverage policy, and you cannot buy one. The Blue Shield program must investigate that phase of administration and determine for itself, the same as it has determined for itself the feasibility of insuring medical care.

Diagnostic Studies

Diagnosis is another item which has caused discontent and serious complaint and has been discussed numerous times at hospital staff meetings and other places. When caring for their patients, doctors should carry on investigations, examinations, laboratory procedures, et cetera, which are necessary to give him sufficient data upon which to make a diagnosis and outline a course of procedure. A complete study is a laudable and very proper procedure, however in many cases it has been abused.

Some doctors order laboratory and other examinations too profusely and some times unnecessarily for the proper and adequate care of their patients. It should be remembered that somebody somewhere must pay for all these services—they are not free.

The hospital must charge them to the patient or to Blue Shield, Blue Cross or other insurance, else the hospital is left holding the bag and with an inadequate income.

How to control this service has become a problem. Years ago, Blue Shield brought the matter to the State Medical Society, believing it was a medical administrative problem. Hospital staffs were asked to be on the lookout. This problem is now before us again and the most important stimulus is the very fact that so many groups, bureaucrats, the Insurance Commissioner, comment upon the prepayment services pricing themselves out of existence. This is one item which our members could very easily bring into play with very favorable results. This also was considered at the special MSMS House of Delegates meeting.

As for medical service, in all its forms, pricing itself out of reach, every other service is doing the same. Plumbers, painters, secretaries, bureaucrats, government—all costs are increasing at about 3 per cent a year. The people need Blue Shield—they will pay for it, recognizing it as a necessary cost.

Michigan Clinical Institute

On March 8-10 of this year, Michigan held its Fifteenth Annual Clinical Institute, and we were very much impressed with its extensive coverage, with the investigations of new methods, new materials and new procedures. The program was carried through without a hitch. This included many notable papers, panel discussions and a very outstanding closed television presentation. There was a cancer conference one noon in which outlines were given of research programs and problems that are now being carried on, how and where they are being done and some comments upon the findings and the anticipated findings in the not too distant future.

The first evening was devoted to a discussion of hypnosis in medicine. The chairman was R. W. Wagoner, M.D., of Ann Arbor, and the whole subject was thoroughly investigated. Martin T. Orne, M.D., Boston, told about "Research in Hypnosis," and Louis J. West, M.D., Oklahoma City, talked about "The Use and Value of Hypnosis," both illustrated with motion pictures. Harold Rosen, M.D., Baltimore, discussed "Pitfalls," and the program was followed by a very well-attended and active question-and-answer period. The topic was thoroughly explored, its advantages outlined and its dangers and pitfalls stressed. No one should use hypnosis without a thorough grounding in psychiatry as well as other phases of medicine.

The second evening program under the chairmanship of A. Hazen Price, M.D., Detroit, offered a panel on "Considerations of Nursing Home Care of the Older Patient." Many points were brought out and the impression was that this is a topic demanding more and more attention and immediately. We have the know-how and will be able to care for the aging population satisfactorily if allowed to do so. A panel discussion featured "The Psychiatrist's Viewpoint of Patient Care," presented by Jack Weinberg, M.D., Chicago; Alexander H. Hirschfeld, M.D., Detroit, and Raymond W. Waggoner, M.D., Ann Arbor. This was a very searching discussion stimulating in the extent to which modern medicine is investigating all the types of human frailty. It was followed by half a dozen renowned speakers who were in the audience.

We have always believed that the dominant leaders of the medical profession have ability and a keen impulse to search into almost any area where knowledge is lacking and find leadership which will produce solutions of almost any problem which may be placed before the group. This has happened in the past—it will happen in the future. The amazing thing to witness is how rapidly these topics are being successfully investigated and the promise of the future.

The Blue Shield Number

This is the thirteenth time the June number of THE JOURNAL of the Michigan State Medical Society has been specifically dedicated to Michigan Medical Service with special articles and reports and a special cover design.

The June 1949 cover pictured Robert Novy, M.D., former Michigan Medical Service president, receiving a citation from the National Blue Shield Commission, certifying that Michigan was the first Blue Shield plan to reach a membership of one million persons. General Hawley, executive secretary of Blue Cross and Blue Shield at that time, presented the plaque, and Jay Ketchum, then MMS administrative director, and Howard Shriver, M.D., president of the National Association of Blue Shield Plans, were observers. Since that time, each June has been especially dedicated to Michigan Medical Service with special material and a significant cover design. Michigan Blue Shield was first memorialized with special attention other than news items, reports and editorials, with the December 1947 number, "Blue Cross a Public Trust." (At that time, the term "Blue Shield" had not yet been generalized—both organizations were being called "Blue Cross.")

That issue reported a conference with Senator

Arthur Vandenberg, in which he, in the course of an all-day session with a group of administrative officers, told us that our organization was a public trust—that without our intention we had made it so. As such, we owed reports and services to the public. At that time, he said Michigan Medical Service had taken \$50 million from the public and had spent it in benefit of their health. During twenty-one years, Blue Shield has been carrying out its function, paying for medical services to subscribers and expended almost half a billion dollars. Right now, payments are in excess of \$8 million a month.

Strange to say, the bureaucrats and the socializers have very shrewdly left medicine out of the King-Anderson-Kennedy Bill (HR 4222). The administration is claiming this cannot be socialized medicine because medicine and surgery are not included. If the Social Security program is breeched and this burden of care is put upon it, only very slight amendments may include not only hospital and nursing service and old-age home services, but medical service and surgery and everything doctors do in caring for their patients.

We are very happy to dedicate this number to our Blue Shield program, which in times past, Senator Vandenberg told us, saved medicine from socialized medicine and demonstrated that services could be given to our public without compulsory federal intervention. The Blue Cross and the Blue Shield, in large measure, may again be the salvation of our system of private practice of medicine. It can be, if our membership will cooperate and make it work; otherwise, our advisors tell us socialized medicine is only one step in the future.

We are happy again to present Michigan's Blue Shield.

Kerr-Mills Act vs the King-Anderson Bill

At the special meeting of the House of Delegates of the Michigan State Medical Society, April 16, most of the discussion and action taken pertained to these two bills. The House of Delegates, in its action, and The Council, following through on April 19, urged that each member of the Society familiarize himself with these two pieces of legislation. We have discussed both of them on previous occasions.

The King-Anderson Bill (HR 4222) and (S 909) is the one now in Congress which the administration says is not socialized medicine, but which the medical profession contends, if enacted, would be socialized medicine as far as the bureaucrats and the social planners

wish to make it. It provides a deductible hospital service for every beneficiary of Social Security. The patient must pay \$10 per day for the first nine days with a minimum of two days, after which the government pays the rest of the hospital bill up to ninety days. No medical service or surgical service is included. Diagnostic service is included after the patient pays the first \$20. The patient can stay ninety days in the hospital, then may go to a nursing home or a convalescent home for another 120 days. A second entrance into the hospital is a new case. The amounts charged and the regulations for the hospitals must be approved by the head of the department (HEW).

The Kerr-Mills Bill was passed by the Federal Congress in the interim session between the nominations and the elections last year after much conference with the AMA, Blue Shield and other organizations. It provides that persons over sixty-five in limited incomes (under \$1,500) may receive services through the State Departments of Social Welfare, the Federal government paying half of this bill. This takes care of between 3 and 4 million people on the relief rolls, whether or not on Social Security. Approximately half the states have enacted coordinating laws, and the services are in effect now. HR 4222, if passed, would not go into effect until July 1962.

In Michigan, the Kerr-Mills Bill provides service corresponding with Blue Cross-Blue Shield coverages, but administered under the Department of Social Welfare. The plan provides care for the needy aging people through general taxation which is assessed to everybody rather than through a special tax applied only to the lower income group up to \$4,800 at the present time.

The medical profession believed that it had done a constructive service in sponsoring and offering this help for the needy aging people, rather than overloading social security with "socialized medicine." We were happy. However, a discussion at the MSMS Council meeting indicates there is an area in Michigan where the Kerr-Mills Bill cannot be used. Such patients cannot be placed in the Detroit hospitals because payments are only 70 per cent of costs and because the State of Michigan is in arrears \$16.5 million for care for its people. The hospitals, in self defense, are not accepting these patients. Members of the medical profession should use whatever influence they have to place Michigan back on a solvent basis and to pay these bills so hospitals and the doctors can render care to the aging. The difficulty seems

to be primarily in the Wayne County area—Too bad! It prevents Kerr-Mills benefits to patients in the Detroit District. This section of the membership in the Michigan State Medical Society feel aggrieved and justly so. We owe them some relief.

Responsibility Assigned

The continued turmoil over Blue Shield since the M-75 policies were brought out is causing certain facts to boil to the surface. They are well discussed in the editorials composed by Dr. Haughey.

It is an anomalous situation in which responsibility for increased costs, caused by increased utilization which was invited by expanded benefits should be placed on those rendering the service. Surely, the actuaries bear some responsibility. When the premiums were set, they already had had a warning when we were told many years ago that a \$6,000 policy could not be sold for a price the public would be willing to pay.

If pre-payment plans are pricing themselves out of the market, the experience should serve to point up the rapid rise in costs of any social scheme—government sponsored plans especially—and this gives rise to the ever distasteful expedient of control.

Blue Shield was improperly sold under the old plans. It was bought and treated as an indemnity. Neither the public nor the doctors quite realized that this was so. Then came the readjustment to the guaranteed income limit. People have a right to receive the care represented to them as available under these plans. Doctors have a right to participate or not, as their circumstances dictate.

Controls are onerous to doctors and patient alike. The extension of service available under the present policies represents the better medical care which is our goal, and American physicians have stood out firmly for their right to practice unrestricted by the oppressive restraints of arbitrary rules, laws and committee action. We find it distasteful that repeatedly the doctors are told they must do something about utilization. And we find it a bit impractical for doctors eternally to be expected to advise about fee.

Many will not agree, but this writer finds it virtually impossible to estimate the cost of an illness. Freed of economic restraints, the cost will always rise. Diagnostic procedures will always be more extensive

(Continued on Page 808)

Michigan State Medical Society

The Ninety-Sixth Annual Session



H. J. MEIER, M.D.
Coldwater
Council Chairman



K. H. JOHNSON, M.D.
Lansing
President



J. J. LIGHTBODY, M.D.
Detroit
Speaker



D. BRUCE WILEY, M.D.
Utica
Secretary

OFFICIAL CALL
The Michigan State Medical Society will convene in Annual Session in Grand Rapids, Michigan, September 24-25-26-27-28-29, 1961. The provisions of the Constitution and Bylaws and the Official Program will govern the deliberations.

KENNETH H. JOHNSON, M.D.
President

H. J. MEIER, M.D.
Council Chairman

J. J. LIGHTBODY, M.D.
Speaker

H. F. FALLS, M.D.
Vice Speaker

Attest:
D. BRUCE WILEY, M.D., *Secretary*



H. F. FALLS, M.D.
Ann Arbor
Vice Speaker

THREE-DAY SESSION OF HOUSE OF DELEGATES

September 24-25-26, 1961

First Meeting—Sunday, 8:00 p.m.

The 1961 House of Delegates of the Michigan State Medical Society will hold a three-day session beginning Sunday, September 24, at 8:00 p.m. The business of the House of Delegates will be transacted in the Ballroom of the Pantlind Hotel, Grand Rapids.

The House will meet also on Monday, September 25 at 9:00 a.m. and 8:00 p.m. and on Tuesday, September 26, at 9:00 a.m. and at 8:00 p.m.

The intervals between meetings of the House of Delegates have been spaced to permit the Reference Committees ample time to transact all business referred to them.

June, 1961

SEATING OF DELEGATES

"A Delegate once seated shall remain a Delegate throughout the entire session and for one year thereafter until the next Session of this House of Delegates, and his place shall not be taken by any other Delegate or Alternate, provided that in case of emergency the House of Delegates may seat a duly accredited Alternate from his component County Society. Any Delegate-Elect not present to be seated at the hour of call of the first meeting may be replaced by the accredited Alternate next on the list as certified by the Secretary of the component County Society involved."—MSMS Bylaws, Chapter 9, Section 6.

Michigan State Medical Society

The Ninety-Sixth Annual Session

PANTLIND HOTEL, GRAND RAPIDS
SEPTEMBER 24-25-26-27-28-29, 1961

INFORMATION

- **GRAND RAPIDS WILL BE HOST TO MSMS IN SEPTEMBER, 1961.**
- **MSMS HOUSE OF DELEGATES** convenes Sunday, September 24, at 8:00 p.m. the Ballroom, Pantlind Hotel. It will also hold two meetings on Monday, September 25 and two on Tuesday, September 26.
- **THE PROGRAM OF THE ASSEMBLY** for the 96th Annual Session of the Michigan State Medical Society lists guest speakers from all parts of the United States. They are the usual stars in the medical world who always grace the podium at annual conventions of the Michigan State Medical Society; they insure a valuable concentrated refresher course in all phases of medicine and surgery for the busy practitioners of Michigan, neighboring states, and the Province of Ontario.
- **DATES OF SCIENTIFIC ASSEMBLY:** Wednesday through Friday, September 27-29, 1961.
- **REGISTRATION FOR SCIENTIFIC SESSION:** Tuesday, 10:00 a.m. (September 26) through Friday noon (September 29), Civic Auditorium. Present your State Medical Society, American Medical, or Canadian Medical Association membership card to expedite registration.
- **NO REGISTRATION FEE FOR STATE MEDICAL SOCIETY AND CMA MEMBERS.** Doctors of Medicine, who are not members of their state medical society or the Canadian Medical Association, will be accorded the privileges of the MSMS Annual Session upon payment of a \$25.00 registration fee.
- **REGISTER AS SOON AS YOU ARRIVE. ADMISSION BY BADGE ONLY.**
- **MEMBERS OF MICHIGAN MEDICAL SERVICE** will meet in annual session, Tuesday, September 26, at 2:00 p.m. This meeting will follow the annual MMS luncheon which will be held in the Ballroom of the Pantlind Hotel.
- **ALL SUBJECTS** at the MSMS Annual Session are applicable to clinical medicine. They stress diagnosis and treatment, usable in everyday practice.
- **POSTGRADUATE CREDITS** given to every MSMS member who attends MSMS Annual Session.
- **FIVE ASSEMBLIES**—16 Section Meetings—all on September 27-28-29.
- **PAPERS WILL BEGIN AND END ON TIME.** The MSMS scientific meeting always features by-the-clock promptness and regularity.

ANNUAL SESSION APPOINTMENTS

Chairman of Arrangements

H. G. Benjamin, M.D., Grand Rapids

House of Delegates News Committee

J. J. Lightbody, M.D., Detroit, Chairman
H. F. Falls, M.D., Ann Arbor
C. Allen Payne, M.D., Grand Rapids
D. Bruce Wiley, M.D., Utica

Scientific News Committee

H. G. Benjamin, M.D., Grand Rapids, Chairman
F. S. Alfenito, Jr., M.D., Grand Rapids
F. C. Brace, M.D., Grand Rapids
J. A. Ferguson, M.D., Grand Rapids
A. B. Gwinn, M.D., Hastings
P. W. Kniskern, M.D., Grand Rapids
C. L. Weston, M.D., Owosso

Scientific Exhibits Committee

Joseph R. Lantini, M.D., Chairman

- **TECHNICAL AND SCIENTIFIC EXHIBITS** will contain much that is new and scientifically educational. Two daily intermissions to view the exhibits have been arranged.
- **STATE SOCIETY DINNER DANCE**, Thursday, September 28, in the Ballroom of the Pantlind Hotel, Grand Rapids at 7:00 p.m., reception—dinner—dancing. All MSMS members and their ladies are invited to the State Society Dinner Dance for an evening of fun and merriment. Join the group for preprandials, followed by dinner, dancing, a highly amusing talk by our own Homer H. Stryker, M.D., of Kalamazoo, and a stellar floor show. It's all for you and your lady!

SCIENTIFIC ASSEMBLY

Wednesday-Thursday-Friday
September 27-28-29, 1961

SAVE AN ORDER FOR THE EXHIBITORS AT THE
MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION

Michigan State Medical Society

Ninety-Sixth Annual Session

HOUSE OF DELEGATES

PANTLIND HOTEL, GRAND RAPIDS, SEPTEMBER 24-25-26, 1961

ORDER OF BUSINESS*

SUNDAY, SEPTEMBER 25, 1961

Ballroom, Pantlind Hotel, Grand Rapids

6:00 p.m.—Registration

8:00 p.m.—First Meeting

1. Call to Order by Speaker
2. Report of Committee on Credentials
3. Roll Call
4. Prayer—R. Wallace Teed, M.D., Ann Arbor
5. Appointment of Reference Committees
 - (a) On Officers' Reports
 - (b) On Reports of The Council
 - (c) On Reports of Standing Committees
 - (d) On Reports of Special Committees
 - (e) On Constitution and Bylaws
 - (f) On Resolutions
 - (g) On Special Memberships
 - (h) On Rules and Order of Business
 - (i) On Legislation and Public Relations
 - (j) On Hygiene and Public Health
 - (k) On Medical Service and Prepayment Insurance
 - (l) On Miscellaneous Business
 - (m) On Executive Session
 - (n) On National Defense and Disaster Planning
6. Speaker's Remarks—J. J. Lightbody, M.D., Detroit
7. President's Remarks—Kenneth H. Johnson, M.D., Lansing
8. President-Elect's Remarks—Otto K. Engelke, M.D., Ann Arbor
9. Annual and Supplemental Reports of The Council—H. J. Meier, M.D., Coldwater, Chairman of The Council
10. Report of Delegates to American Medical Association—W. A. Hyland, M.D., Grand Rapids, Chairman
11. Brief of Annual Report of Woman's Auxiliary—Mrs. Paul Ivkovich, Reed City
12. Brief of Annual Report of Michigan State Medical Assistants Society—Mrs. Betty Lou Willey, Port Huron
13. Report on Michigan Medical Service

MONDAY, SEPTEMBER 25, 1961

Ballroom, Pantlind Hotel, Grand Rapids

9:00 a.m.—Second Meeting

14. Supplemental Report of Committee on Credentials
15. Roll Call
16. Awards:
 - (a) Selection of Michigan's Foremost Family Physician
 - (b) Fifty-year Awards

*See the Constitution, Articles IV, VII, and XII, and the Bylaws, Chapter 9 on "House of Delegates."

June, 1961

17. Resolutions†

18. Reports of Committees of the House of Delegates

- (A) Permanent Advisory Committee on Fees
- (B) Committee to Review Constitution and Bylaws
- (C) Committee to Study Problem of Malpractice
- (D) Committee to Study the Problem of Indigent Doctors of Medicine

19. Reports of

1. MSMS Standing Committees

- (A) Committee on Postgraduate Medical Education
- (B) Public Health Committee
 - (1) Committee on Rheumatic Fever Control
 - (2) Committee on Maternal Health
 - (3) Committee on Venereal Disease Control
 - (4) Committee on Tuberculosis Control
 - (5) Committee on Occupational Medicine
 - (6) Committee on Mental Health
 - (7) Committee on Child Welfare
 - (8) Committee on Geriatrics
 - (9) Cancer Control Committee
 - (10) Committee on Blood Banks
 - (11) Committee on Diabetes
 - (12) Iodized Salt Committee
 - (13) Committee on Rural Medical Service
- (C) Committee on Ethics
- (D) Committee on Legal Affairs
- (E) Committee on Mediation
- (F) Committee on Public Relations (and Subcommittees)

2. MSMS Special Committees

- (A) Advisory Committee to Michigan State Medical Assistants Society
- (B) Advisory Committee to Woman's Auxiliary
- (C) Medical Care Study Committee
- (D) Scientific Radio Committee
- (E) Study on Prevention of Highway Accidents Committee

MONDAY, SEPTEMBER 25, 1961

Ballroom, Pantlind Hotel, Grand Rapids

8:00 p.m.—Third Meeting

20. Supplemental Report of Committee on Credentials
21. Roll Call
22. Unfinished Business

†All resolutions, special reports, and new business shall be presented in writing in triplicate (Bylaws, Chapter 9, Section 10-m).

23. New Business

24. Reports of Reference Committees

- (a) On Officers' Reports
- (b) On Reports of The Council
- (c) On Reports of Standing Committees
- (d) On Reports of Special Committees
- (e) On Constitution and Bylaws
- (f) On Resolutions
- (g) On Special Memberships
- (h) On Rules and Order of Business
- (i) On Legislation and Public Relations
- (j) On Hygiene and Public Health
- (k) On Medical Service and Prepayment Insurance
- (l) On Miscellaneous Business
- (m) On Executive Session
- (n) On National Defense and Disaster Planning

TUESDAY, SEPTEMBER 26, 1961

Ballroom, Pantlind Hotel, Grand Rapids

9:00 a.m.—Fourth Meeting

- 25. Supplemental Report of Committee on Credentials
- 26. Roll Call
- 27. Unfinished Business
- 28. New Business
- 29. Supplemental Reports of Reference Committees

TUESDAY, SEPTEMBER 26, 1961

Ballroom, Pantlind Hotel, Grand Rapids

8:00 p.m.—Fifth Meeting

- 30. Supplemental Report of Committee on Credentials
- 31. Roll Call
- 32. Unfinished Business
- 33. Supplemental Report of The Council
- 34. Supplemental Reports of Reference Committees
- 35. Elections

- (a) Councilors
 - 1st District—A. E. Schiller, M.D., Detroit—Incumbent
 - 4th District—Wm. A. Scott, M.D., Kalamazoo—Incumbent
 - 5th District—C. Allen Payne, M.D., Grand Rapids—Incumbent
 - 6th District—H. H. Hiscock, M.D., Flint—Incumbent
- (b) Delegates to American Medical Association
 - J. S. DeTar, M.D., Milan—Incumbent
 - W. A. Hyland, M.D., E. Grand Rapids—Incumbent
 - O. J. Johnson, M.D., Bay City—Incumbent
 - C. I. Owen, M.D., Detroit—Incumbent
- (c) Alternate Delegates to American Medical Association
 - W. W. Babcock, M.D., Detroit—Incumbent
 - G. B. Saltonstall, M.D., Charlevoix—Incumbent
 - J. M. Wellman, M.D., Lansing—Incumbent
 - B. M. Harris, M.D., Ypsilanti—Incumbent
- (d) President-Elect
- (e) Speaker of the House of Delegates
- (f) Vice Speaker of the House of Delegates

36. Adjournment

**MICHIGAN MEDICAL SERVICE
MEMBERS' SCHEDULE**

(Coincident with MSMS House of Delegates)

Pantlind Hotel, Grand Rapids

Tuesday, September 26, 1961

12:30 p.m.—Reception, Kent State Room

1:00 p.m.—Luncheon, Kent State Room

2:00 p.m.—MMS Annual Meeting, Ballroom

All MSMS Delegates are members of Michigan Medical Service corporation and are expected to attend the MMS Luncheon and Annual Meeting. The MMS Annual Meeting is open to ALL members of the medical profession, who are cordially invited to attend.

**HOTEL RESERVATIONS
MICHIGAN STATE MEDICAL SOCIETY**

96th Annual Session

Grand Rapids, September 27-28-29, 1961

The reservation blank below is for your convenience in making your hotel reservations in Grand Rapids. Please send your application to the Committee on Hotels for MSMS Convention, Pantlind Hotel, Grand Rapids, Michigan. Mailing your application now will be of material assistance in securing hotel accommodations.

As very few singles are available, registrants are requested to co-operate with the Committee on Hotels by sharing a room with another registrant, when convenient.

Committee on Hotels,
Michigan State Medical Society
c/o Jack Ament, Room Reservation Manager
Pantlind Hotel, Grand Rapids, Michigan

Please make hotel reservation(s) as indicated below:

_____ Single Room(s) _____ persons

_____ Double Room(s) for _____ persons

_____ Twin-Bedded Room(s) for _____ persons

Arriving September _____ hour _____ A.M. _____ P.M.

Leaving _____ hour _____ A.M. _____ P.M.

Hotel of First Choice: _____

Second Choice: _____

Names and Addresses of all applicants including persons making reservations:

Name	Address	City	State

Date _____ Signature _____

Address _____ City _____

MSMS HOUSE OF DELEGATES, 1961

Delegates and Alternates

(Names of Alternates appear in italics)

OFFICERS

J. J. Lightbody, M.D., 501 David Whitney Bldg., Detroit
Speaker

Harold F. Falls, M.D., 1313 E. Ann St., Ann Arbor
Vice Speaker

D. Bruce Wiley, M.D., 8090 Clinton River Rd., Utica
Secretary

Milton A. Darling, M.D., 673 Fisher Bldg., Detroit
Immediate Past President

A. Verne Wenger, M.D., 132 Grand Ave. S.E., Grand Rapids
Honorary Member

ALLEGAN

Lewis F. Brown, M.D., 133 E. Allegan St., Otsego
James I. Clark, M.D., Box B, Fennville

ALPENA-ALCONA-PRESQUE ISLE

John W. Bunting, M.D., 110 N. First St., Alpena
Edward A. Hier, M.D., 125 N. Second Ave., Alpena

BARRY

Alexander B. Gwinn, M.D., 102 E. State St., Hastings
Everett L. Phelps, M.D., 118 E. Walnut St., Hastings

BAY-ARENAC-IOSCO

David A. Bowman, M.D., 101 W. John St., Bay City
Stanley A. Cosens, M.D., 101 W. John St., Bay City
Wm. G. Gamble, Jr., M.D., 2010 5th Ave., Bay City
Edward R. Rodda, M.D., 101 W. John, Bay City

BERRIEN

Noel J. Hershey, M.D., P.O. Box 222, Niles
Paul O. Rague, M.D., 960 Agard, Benton Harbor
F. Alan Kennedy, M.D., 239 Pipestone, Benton Harbor
Fredk. H. Lindenfeld, M.D., 8 North St. Joseph Ave., Niles

BRANCH

Robert M. Leitch, M.D., 304 N. Broadway, Union City
Robert J. Fraser, M.D., 22 Pearl St., Coldwater

CALHOUN

Harvey C. Hansen, M.D., 65 W. Michigan Ave., Battle Creek
Keith S. Wemmer, M.D., 1472 W. Michigan Ave., Battle Creek
Chas. J. Ryan, M.D., Leila Post Hospital, Battle Creek
Salvatore A. Yannitelli, M.D., 1331 W. Michigan, Battle Creek

CASS

Uriah M. Adams, M.D., Marcellus
Sherman L. Loupee, M.D., 110 W. Division St., Dowagiac, Mich.

CHIPPEWA-MACKINAC

Donald D. Finlayson, M.D., 301 E. Spruce St., Sault Ste. Marie
Earl S. Rhind, M.D., 300 Court St., Sault Ste. Marie

CLINTON

Franklin W. Smith, M.D., 105 S. Ottawa, St. Johns
J. M. Grost, M.D., 110 Oakland St., St. Johns

DELTA-SCHOOLCRAFT

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(Continued from Page 800)

when the cost is paid than when the patient pays the whole freight. It would be fatuous to believe otherwise.

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LOUIS J. BAILEY, M.D.
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INDICATIONS: Initial therapy in urethritis, pyelitis, pyelonephritis, ureteritis and prostatitis due to bacterial infections. For continuing therapy, the appropriate agent should be selected on the basis of laboratory sensitivity tests.

In mixed infections with one organism sensitive to tetracycline and another sensitive to sulfamethizole but not to tetracycline, Azotrex may be properly considered for continuing therapy.

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DOSAGE: One or two capsules four times a day. See Official Package Circular for complete information on dosage, side effects and precautions.

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REFERENCE: 1. Rhoads, P. S.: *Postgrad. Med.* 21:563 (June) 1957.




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Wayne State Advances Medical Center Plans

Plans are progressing for the new Wayne State University "Medical Center" in the heart of Detroit. The multi-million dollar plan provides for the redevelopment of an area bounded by Woodward, Mack, Hastings and Ferry. The 236-acre site is adjacent to the Cultural Center and Wayne State.

The major feature of the development is the affiliation of Wayne State's College of Medicine with Woman's, Children's, Grace and Harper Hospitals and the Rehabilitation Institute.

Clarence B. Hilberry, WSU president, has revealed that the first building will be placed just north and east of Harper and Grace Hospitals.

* * *

"THE LOCATION OF THE medical college in the center of the whole area is symbolic of the role it is destined to play in the coordinated operation," Dr. Hilberry said. He noted that the hospitals and the Institute have a total of over 2,000 beds "which will provide an ideal research and teaching center."

"These, combined with the resources of the Detroit Receiving Hospital, will give the College of Medicine resources which are unexcelled," President Hilberry stressed.

"The arrangements which have been concluded with the hospitals make it unnecessary for the university to plan for a university-owned and operated hospital for its teaching and research programs," he added.

The Metropolitan Detroit Building Fund is including in its current campaign \$2,300,000 for land costs and \$1,840,000 to help provide a new building for Children's Hospital. Last year the Legislature authorized \$2,250,000 for a Medical Research Building and granted \$250,000 to prepare the plans. The Research Construction Commission of the National Institutes of Health has allocated an additional \$1,692,000 for matching funds for this building. The gift makes possible the erection of a structure which will have approximately 130,000 square feet of space and will cost almost \$4,000,000.

* * *

DEAN GORDON H. SCOTT of Wayne State University's College of Medicine was appointed in April as vice president for medical college development and Ernest D. Gardner, M.D., was named associate dean of the college of medicine.

Dr. Scott's new duties will consist of formalizing affiliation agreements with associated hospitals and coordinating plans for College of Medicine participation in the proposed Detroit Medical Center—a multi-million dollar redevelopment plan already approved by the federal government. He will retain the deanship but Dr. Gardner will assume many administrative duties.

Dr. Scott has been dean since 1950, while Dr. Gardner has been professor and chairman of the department of anatomy since 1950.



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Whiting Foundation Helps

The American Cancer Society conducted a closed conference of 50 American and foreign scientists to consider "The Possible Role of Immunology in Cancer." The conference held at Rye, New York, was financed in part by a gift made to the Society's Michigan division by the Whiting Foundation of Flint.

The proceedings will be made available later in a special edition of the *Cancer Research* journal.

Slides Available

The Michigan Cancer Registry has available for loan a group of study sets consisting of histologic slides, chiefly of various types of neoplasms. These sets are available without charge to all interested physicians in Michigan. A deposit is required and this will be refunded subject to possible deductions for loss or breakage. For further information please write to Director, Michigan Cancer Registry, 4811 John R Street, Detroit 1, Michigan.



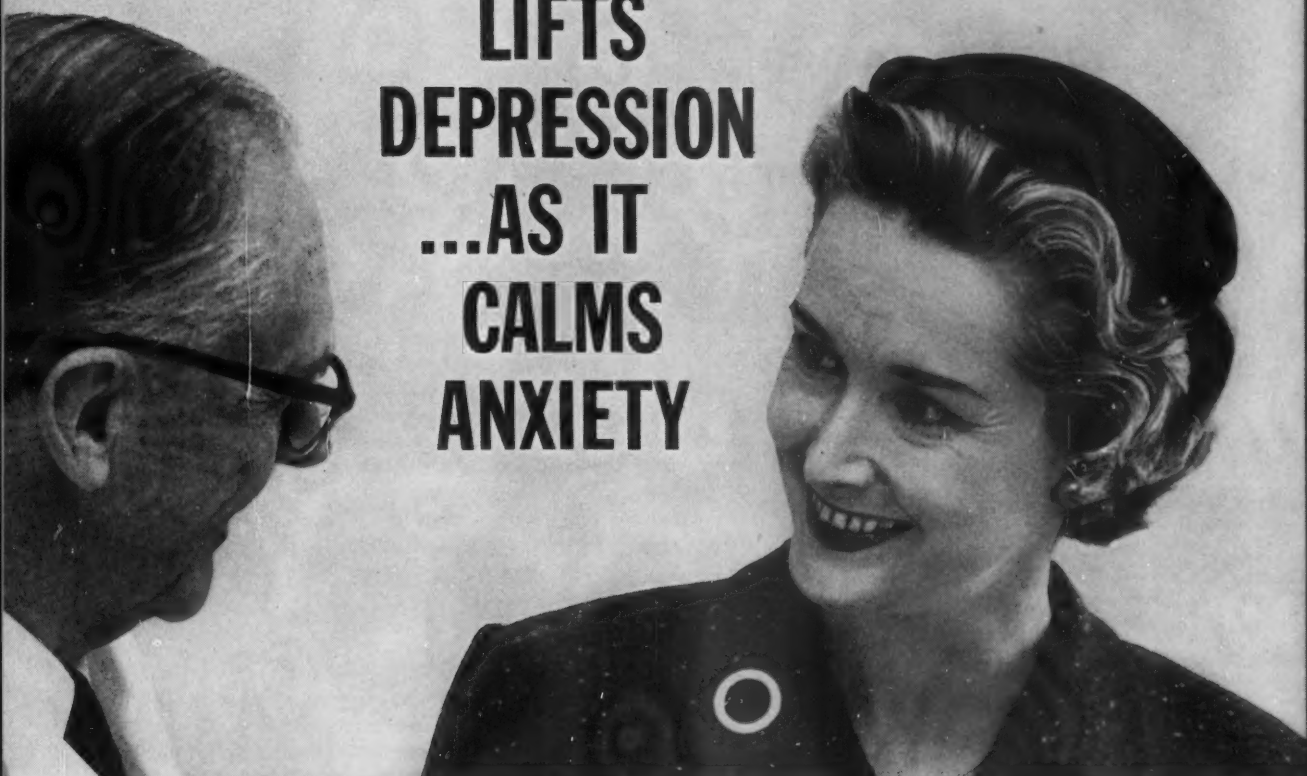
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Cancer Comment

Carcinoma of the Lung

Raymond J. Barrett, M.D.
Detroit, Michigan

Over the past half century, carcinoma of the lung has rapidly increased in incidence to the point where it is now most common cancer of the adult male patient. Being equally as lethal as carcinoma of the stomach, this almost explosive increase has led, on the one hand, to probably premature statements as to causation and, on the other hand, to an unnecessarily fatalistic attitude on the part of many who see the disease only occasionally.

Currently, it is the fashion to attribute a strong relationship to cigaret smoking, with the implication that cessation of smoking would be followed by a steadily decreasing incidence of the disease in the generations to follow. Many investigators, however, retain sincere doubts as to the cause and effect relationship between cigaret smoking and the development of lung cancer.

Studies in South Africa, New Zealand, and the United States on the difference in incidence of the disease between native-born and immigrant populations have been most stimulating in turning attention toward the role of air pollution and other environmental factors. Thus, native white South Africans, the heaviest smokers in the world, have a lung cancer rate less than half that of native-born inhabitants of Great Britain and Wales. Conversely, British immigrants to South Africa have a lung carcinoma rate half again as large as the native-born white South African, but less than that of those who remain in the British Isles. Similar findings have been reported from New Zealand, where it was also noted that the incidence of carcinoma increased with the age of the immigrant at the time of migration.

Traditionally, the incidence of the disease has been six to eight times as high in men as in women. When corrected for identical smoking habits, the ratio in the United States has ordinarily been halved. However, female immigrants to this country from Ireland, Italy, Norway, Sweden and Russia have a higher incidence of the disease than their male counterparts.

Once suspect and then apparently cleared, the internal combustion engine is again under scrutiny as

the result of research on the problem of smog. Running at constant speed, the exhaust gases of a properly adjusted internal combustion engine are relatively low in content of carcinogenic and potentially carcinogenic agents. However, under acceleration and deceleration—conditions which obtain in city driving—the carcinogenic content increases.

Recent work would tend to indicate that we are possibly dealing with a virus as the primary etiologic agent and that a combination of factors previously discussed may predispose in the development of, or relative resistance to, the disease.

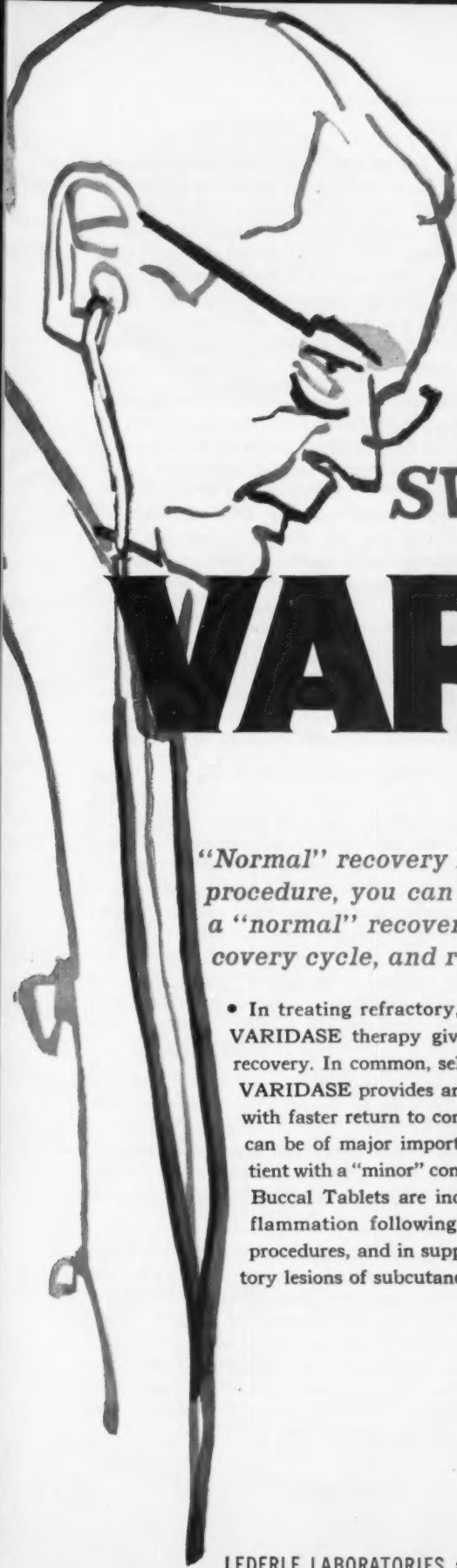
While research continues along the aforementioned lines, it seems reasonable to assume that we have at least a generation who are predisposed to develop the disease at an accelerating rate of rather alarming proportions. At a current annual fatality rate of approximately 38,000 from auto accidents and approximately 30,000 from carcinoma of the lung, the American man is already in more danger from the latter than the former.

Whatever the etiology, control of the disease today requires maximum effort toward early diagnosis and treatment. Detection of the asymptomatic patient who is harboring the disease, in the great majority of instances, will depend on a routine or mass survey film. In the latter, experience in major U. S. cities has shown an incidence of proven lung cancer varying from one in 8,000 to one in 14,000 of those surveyed. Higher yields would certainly be obtained if surveys were limited to men over age forty or forty-five. In such instances, one would be doing primarily a carcinoma survey, whereas most mass surveys encompass a wider group because of primary interest in the detection of tuberculosis. Despite the poor current yield, most studies have shown a higher respectability and survival rate in those picked up on surveys as compared to those whose diagnoses were made in the usual manner after the onset of symptoms.

Once the symptomatic patient has reached the doctor's hands, there is little excuse for failure to reach early diagnosis. Cough is the earliest and most constant symptom. A patient of the cancer age, sufficiently troubled by recent cough to consult a physi-

From the College of Medicine, Wayne State University, Harper Hospital, and Detroit Memorial Hospital.

(Continued on Page 818)



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Carcinoma of the Lung

(Continued from Page 816)

cian, has received an inadequate consultation when the latter consists merely of application of the stethoscope and the dispensing of a favorite anti-tussive remedy. An x-ray examination is obviously indicated. Seldom will a patient, symptomatic from carcinoma of the lung, fail to reveal some abnormality in the chest roentgenogram. Finding of a roentgen abnormality in a symptomatic patient, in the age of high cancer incidence, demands immediate and continued investigation until the cause has been established. If a tenable diagnosis cannot be established by lesser diagnostic means, no hesitancy should be felt in proceeding to exploratory thoracotomy. Under such circumstances, the physician who elects to "follow" a non-resolving or progressive lesion takes an awesome responsibility upon his shoulders.

The sudden appearance of wheezing in a previously asymptomatic patient may not be accompanied by obvious x-ray changes. However, if one is aware that this symptom indicates some degree of airway obstruction, the logic of bronchoscopy is obvious.

That patient who is "fortunate enough" to have hemoptysis as an initial symptom has a much greater

chance of a determined effort at early diagnosis, since bleeding is an ominous symptom to physician and layman alike. Even in the presence of a negative chest x-ray examination, this symptom demands bronchoscopy and, if this is negative, bronchograms. Cytologic examinations, when positive in the presence of a roentgenographically or bronchoscopically visualized lesion, are of great help—more often they will be negative and must not be allowed to lead one to a false sense of complacency.

Approximately one-third of patients with carcinoma of the lung, when referred to the thoracic surgeon, already exhibit signs of distant metastasis or local extension to the point where surgical intervention is obviously not feasible. The remaining two-thirds proceed to exploratory thoracotomy. Of these, about half the carcinomas will be found non-resectable, since complete removal of all visible or palpable tumor cannot be accomplished because of invasion of one or more of the numerous vital structures within the thorax. Therefore, in only half of the explored group (one-third of all cases) is it possible to perform a resection with hope of surgical cure. Although survival rates as high as 35 per cent have been reported, five-year survival in the vast majority of surgically resected carcinomas of the lung will not exceed 10 per cent.

Cure by irradiation therapy alone is extremely uncommon. On the other hand, in many cases it has a pronounced palliative effect in apparently restraining tumor growth for variable, and sometimes extensive periods. With few exceptions, therefore, I believe it should be used in all cases of non-resectable carcinoma. Applying the same reasoning, one might expect best results in attempting by irradiation, to eliminate microscopic mediastinal implants which were not visualized or palpated at the time of surgery. Since the latter condition could exist in any resection, one might recommend irradiation in all cases. On the latter point, there is considerable variation of opinion.

Chemotherapy of pulmonary tumors has been confined, in the main, to nitrogen mustard. Its most readily observable accomplishment seems to lie in the alleviation of the congestion attendant upon malignant invasion of the superior vena cava. On occasion, the subsidence of facial and upper extremity edema has been dramatic.

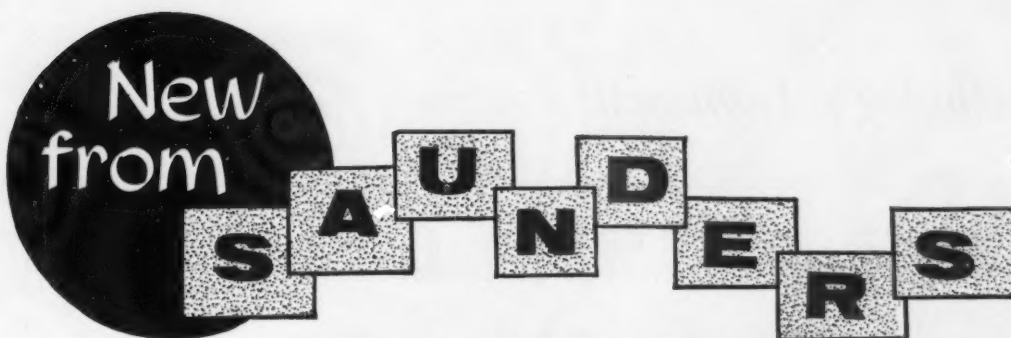
Carcinoma of the lung is a grave disease with ominous prognosis. Lest one become unduly pessimistic, it should be remembered that at present two-thirds of all cases are too far advanced for surgical removal when seen by the surgeon. If, by increased suspicion and more aggressive early diagnostic methods, this group could be halved, then automatically and using only currently available therapeutic methods, the number of five-year survivals could be doubled.

Laboratory Examinations Tissue Diagnosis

Allergy Tests	Hematology
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New (3rd) Edition!—Latest Information on Standard Diets Proven in Practice

The Mayo Clinic Dietetic Committee has spared no effort to make this revision as complete and as accurate as possible. It clearly reflects the advances in food, vitamin and current dietary practice that have been incorporated into Mayo Clinic procedure. Once you have established that your patient needs a special diet, you can turn to this manual for all the information you'll need to prescribe it. Each diet can be adjusted easily to the requirements of individual patients. There is a general description and a short discussion of the adequacy of each diet, with a chart showing types

of food to be included and excluded in each program. Another chart shows the approximate composition.

Among the important changes for this *New (3rd) Edition* you'll find: New information on the low cholesterol diet for atherosclerotic disease—Revisions in the sections on vitamins and other food supplements—Inclusion of the new height-weight tables—The diets for children now accompany those for adults, for each condition.

By the COMMITTEE ON DIETETICS OF THE MAYO CLINIC. About 276 pages, 6"x9¼", wire binding. About \$5.50.—*Just Ready!*
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In this clear and logically organized new book, Dr. White offers a thorough description of the major problems in understanding and managing kidney disease. He illuminates every possible avenue that will help you answer three pressing questions: 1) *Is the patient suffering from renal dysfunction?* 2) *What is the exact nature of the malfunctioning?* 3) *What can be done to alleviate or correct the condition?*

The author shows how renal malfunction affects other body systems and what physicians in various disciplines should know about kidney disease. The bulk of the book deals with specific disorders—their signs, symptoms and management. You'll find sound advice on: Renal function in gout—Inborn errors of renal (tubular) metabolism—Renal cortical necrosis—Hypertension and renal dysfunction—Acute renal failure—Neuropsychiatric aspects of renal dysfunction—Effect of age on renal function—Therapeutic use of water and electrolytes.

By ABRAHAM G. WHITE, M.D., F.A.C.P., Associate Visiting Physician and Chief of the Renal Disease Clinic, Queens Hospital Center, Jamaica, N.Y. 468 pages, 6½"x9¼", illus. \$10.50. *New!*

Rubin—Thoracic Diseases

New!—Emphasizes Cardiopulmonary Relations

This volume gives you an immediately useful guide to diagnosis and therapy of thoracic disorders, both medical and surgical. Coverage embraces a host of management problems relating to diseases of the lungs, pleura, mediastinum and chest wall. The entire presentation emphasizes and integrates important cardiopulmonary relationships.

You'll find: Hundreds of brilliantly clear x-ray films to aid you in radiologic diagnosis—Explanations of specialized procedures such as cardiac catheterization—Practical discussions of hyaline membrane disease, aspiration pneumonia, thromboembolism, pulmonary embolism, pulmonary infarction. Mycotic diseases of lung and carcinoma of the lung are discussed with extreme clarity. Helpful material on *thoracic diseases in the young* and on *perinatal respiratory diseases* delineate valuable pediatric aspects.

By ELI H. RUBIN, M.D., Professor of Clinical Medicine; and MORRIS RUBIN, M.D., Assistant Clinical Professor, Thoracic Surgery, Albert Einstein College of Medicine, Yeshiva University, N.Y.; in Association with George C. Leiner, M.D. and Doris J. W. Escher, M.D. About 864 pages, 7"x10", with 400 illustrations, some in color. About \$20.00 *New—Just Ready!*



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Pathology Comment

These items are provided by the Michigan Pathological Society

Significance of Concentration of Serum Lipides

Lipemia Associated with Ketosis

Serum lipid levels are usually elevated in all conditions associated with ketosis. This lipemia results from the mobilization of fat from adipose tissue for direct utilization in the cell and for the conversion to ketone bodies in the liver. This is somewhat comparable to the lipemia seen after ingestion of fat. Lipemia is common in all types of uncontrolled diabetes, and in severe cases neutral fats are usually doubled, with cholesterol and phospholipides increased by 40 per cent. With successful management of the acidosis there occurs a rapid fall in the lipid levels due to restoration of normal carbohydrate metabolism.

Serum Lipides in the Nephrotic Syndrome

In the chronic stage of glomerulonephritis, in lipid nephrosis, and in amyloid nephrosis the serum is lipemic. The rise is chiefly in the levels of cholesterol and neutral fats. The total lipid concentration is often 2000 mg. per cent or higher with total cholesterol levels of greater than 1000 mg. per cent. There are no symptoms directly ascribable to nephrotic lipemia and there is no ketosis. Liver function tests, with the exception of thymol turbidity, are usually normal.

Serum Lipides in Thyroid Disease

In hypothyroidism total cholesterol levels are usually elevated and conversely in hyperthyroidism serum cholesterol is low and rises to normal with treatment. In hypothyroidism the cholesterol level is only moderately raised and the neutral fats are not increased (as opposed to nephrotic lipemia). While the determination of cholesterol is of little diagnostic value in hyperthyroidism, it offers valuable corroborative evidence in hypothyroidism, especially when the BMR is doubtfully low.

Lipides in Liver Disease

In alcoholic fatty infiltration of the liver, serum lipides do not show any characteristic changes. There may be a slight fall in cholesterol esters, with the total cholesterol concentration unchanged. The changes in serum lipides that occur with obstructive jaundice, hepatitis, and cirrhosis are of great importance in diagnosis and prognosis.

Essential Hyperlipemia

The serum in this disease has a total lipid range from 1200 to 5000, phospholipides 450-1200, cholesterol 400-1200 mg. per cent. Triglycerides (neutral fat) make up the bulk of the serum lipides and fat embolism may occur. The pancreas is often involved and there is frequently glycosuria.

Xanthomatosis and Lipoidoses

Xanthomas may appear in numerous morphological variations and require laboratory information for their specific diagnosis, since the clinical features are too frequently non-specific. Xanthoma patients with clear serum have either normal or elevated values of their cholesterol, cholesterol esters and phospholipides, but no marked elevation in neutral fat. Xanthoma patients with milky serum have elevated neutral fat (600 mg. per cent or more) and may also show cholesterol and phospholipide elevations, but not in proportion to the increased neutral fat. Many patients show abnormalities in all lipid constituents. Therefore, it is important to obtain quantitative measurements on all lipid component fractions.

Serum Lipides and Atherosclerosis

Attempts have been made to link elevated serum cholesterol levels to the development of atherosclerosis. Recent ideas on the relationship of lipides to atherosclerosis are now centered around the neutral fat (triglyceride) fraction. Some investigators now share the opinion that this fraction is of greater importance than cholesterol in the development of atherosclerosis.¹

AVERAGE NORMAL CONCENTRATIONS OF LIPIDE CONSTITUENTS

Constituent	Range (mg. %)
Total lipides	340-800
Neutral fat (triglycerides).....	60-150
Total cholesterol	135-260
Free	40-70
Esterified	95-200
Total phospholipide	156-390
Cholesterol/Phospholipide ratio8

Reference

1. Passananti, G. T., Guerrant, N. B. and Thompson, R. Q.: Effects of supplementary methionine and choline on tissue lipides and on the vascular structure of cholesterol-fed growing rats. *J. Nutrition*, 66:55-74, 1958.



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*Gamble, C.J.: *Am. Pract. & Digest. Treat.* 11:852 (Oct.) 1960. See also Berberian, D.A., and Slighter, R.G.: *J.A.M.A.* 168:2257 (Dec. 27) 1958; Kaufman, S.A.: *Obst. and Gynec.* 15:401 (March) 1960; Warner, M.P.: *J.Am.M. Women's A.* 14:412 (May) 1959.

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MICHIGAN DEPARTMENT OF HEALTH

ALBERT E. HEUSTIS M.D., State Health Commissioner

Limitations on Laboratory Examinations of Animal Heads for Rabies

Increased demands for examinations for rabies made to the Division of Laboratories of the Michigan Department of Health make it necessary to require much closer medical screening of specimens submitted. Only specimens which meet the following criteria will be accepted for rabies examination:

1. Human exposure as determined by a physician.
2. Animal exposure as determined by a physician or veterinarian, and then examination will be made only when necessary to establish a legal basis for destruction of the exposed animal.
3. Those specimens of special interest to the Department of Conservation.

Animal heads only will be accepted. Do not send or bring an entire carcass to the laboratory.

Pamphlet—Diagnosis of Phenylketonuria

A new pamphlet on the diagnosis of phenylketonuria has just been released. This is intended for use by professional personnel and not for general distribution to parents. Copies for physicians are available in limited number from the Division of Maternal and Child Health, Michigan Department of Health.

New Compliance Items for Nursing Homes and Homes for Aged

List No. 4 of the new compliance items for 1962 of the Rules and Regulations for Nursing Homes and Homes for the Aged has been released.

Clinic to Move

On May 1, 1961, the Detroit Social Hygiene Clinic will be moved from its present location at 660 Clinton Street, Detroit, to Building No. 7 at 8811 John C. Lodge Highway, adjacent to Herman Kiefer Hospital.

Rules and Minimum Standards for Hospitals

The revised edition of Rules and Minimum Standards for Hospitals has been published along with a revised legal definition of a hospital. A major change in the rules is that it is no longer necessary for a hospital to maintain a birth register. It is, however, still nec-

essary to maintain a delivery room book; and infant records must include information sufficient to duplicate a birth certificate.

Laboratory Diagnostic Services for Virus Infections

The Michigan Department of Health will accept specimens from suspected cases of aseptic meningitis, polio-like infections and poliomyelitis beginning May 1, 1961. Specimens required for the laboratory diagnosis of these diseases will include feces, taken at the acute stage of illness, and acute and convalescent sera. These specimens will not be examined unless accompanied by a case history. Specimen kits for feces and blood specimens may be obtained from the Division of Laboratories, Michigan Department of Health, Lansing, Michigan. Directions for submission of specimens are provided with the kits.

The complete list of virus diseases for which laboratory diagnostic tests are available is as follows:

Virus Diseases	Specimens Required
Central Nervous System	
Poliomyelitis	Feces and paired sera, or paired sera only
Polio-like infections	Feces and paired sera
Aseptic meningitis	Feces and paired sera
Measles encephalitis	Paired sera
Mumps encephalitis	Paired sera
Herpes simplex encephalitis	Paired sera
Eastern equine encephalomyelitis	Paired sera
Western equine encephalomyelitis	Paired sera
St. Louis encephalitis	Paired sera
Lymphocytic choriomeningitis	Paired sera
Respiratory System	
Croup	Paired sera
Febrile catarrh	Paired sera
Non-bacterial pharyngitis	Paired sera
Influenza and influenza-like illness	Paired sera
Psittacosis	Paired sera
Rickettsial Infections	
Rocky Mountain spotted fever	Paired sera
Typhus	Paired sera
Rickettsial pox	Paired sera
Q fever	Paired sera
Other Virus Infections	
Epidemic keratoconjunctivitis	Paired sera
Rabies	Animal head or brain*

*Consult local health officer for information on method of submission of specimens.

Brief and to the Point

"CITIZEN OF THE YEAR"—W. H. Alexander, M.D., who went to the Upper Peninsula in 1925 on a two-year assignment but remained permanently to serve, is the 1961 "Citizen of the Year" in Iron Mountain. The award was made by the Lions Club.

Dr. Alexander, a native of Paterson, N. J., and a graduate of the University of Harvard school of medicine, was sent to the Upper Peninsula in 1925 by the Ford Motor Company to spend two years setting up Ford's medical program for the entire Upper Peninsula. When his work with Ford was completed, he stayed there to run up 36 years of continuous medical service to the community.

* * *

SURGEON CITED—An American Cancer Society Certificate of Merit recently was presented to Russell L. Mustard, M.D., Battle Creek, at a community program. The national recognition was for his work in the control of cancer.

* * *

HONORED AT CASSOPOLIS—D. H. Swengel, M.D., was honored recently at a Cassopolis open house celebration on his 80th birthday anniversary. A practicing physician for 53 years, Dr. Swengel has been at Cassopolis since 1940.

* * *

KAHN HONORED—Dr. Reuben L. Kahn (Sc.D.), Ann Arbor, has been elected an honorary life member of the Medical Society for the Study of Venereal Diseases in London.

* * *

RE-ELECTED HISTORIAN—Sidney Friedlaender, M.D., Detroit, was re-elected as historian of the American Academy of Allergy at its 17th annual meeting in Washington, D. C. Dr. Friedlaender has been a member of the executive committee of the Academy since 1959.

* * *

SPEAK IN NEBRASKA—Two Michigan doctors of medicine were guest lecturers at the 93rd annual session of the Nebraska State Medical Society in Omaha, May 1-4. Each man appeared twice. They were S. E. Gould, M.D., of Eloise, and John F. Holt, M.D., of Ann Arbor.

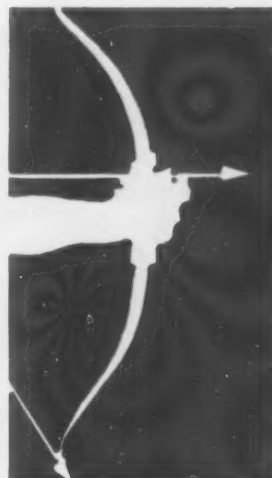
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ANNOUNCEMENT—Applications for certification in the American Board of Obstetrics and Gynecology, new and reopened, Part I, and requests for re-examination in Part II are now being accepted. Deadline for receipt of applications is August 1.

Candidates are requested to write for a current bulletin so they may be well informed on the present requirements. Write to the American Board of Obstetrics and Gynecology, Office of the Secretary, Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

* * *

AWARDED GOLD-HEADED CANE—George Hoyt Whipple, M.D., 82-year-old New York pathologist who pioneered research in anemia, Whipple's disease, and metabolism, was named recipient of



NEWS BRIEFS

823

NEWS BRIEFS

the Gold-Headed Cane of the American Association of Pathologists and Bacteriologists at its annual meeting. Dr. Whipple is emeritus professor of pathology at the University of Rochester School of Medicine and Dentistry, Rochester, New York.

TALK IN GEORGIA—Ralph D. Rabinovitch, M.D., Northville, recently presented a paper before the Medical Association of Georgia, entitled, "Reading Retardation—a Psychiatric, Neurological and Educational Approach."

Jack Lapides, M.D., Ann Arbor, presented two papers at the same meeting about "Physiology of the Urinary Sphincter and Its Relationship to Operations for Stress Incontinence" and "Use of Renal Function Tests in Surgical Practice."

SEAT BELTS—The Chrysler Corporation announces that starting next fall all passenger cars built by the Corporation will contain built-in seat belt anchorages.

SPEAKS IN ENGLAND—Carl E. Badgley, M.D., Ann Arbor, addressed the British Orthopedic Association at Manchester, England, at its annual meeting.

EUROPE BOUND—Konstantin Scharenberg, M.D., Ann Arbor, will attend the Fourth Neuropathological Congress in Munich, Germany, and the Fourth International Neurological Congress in Rome, Italy, this autumn. He is to present papers at both meetings and also will visit research laboratories of neuropathology in these countries.

VISITING PROFESSOR—Russell N. DeJong, M.D., Ann Arbor, served as visiting professor of neurology at the University of California Medical School, San Francisco, in April.

SELECTIVE SERVICE ANNOUNCEMENT—Local Boards of the Selective Service System are requiring the classification of all physicians in internships which will terminate by June 30, 1961, who are now classified in Class II-A and who were born on or after January 1, 1934. This reclassification is made necessary by the failure of the military medical services to obtain from this year's interne group sufficient volunteers for commission and active duty beginning July 1961. The following categories are involved:

1. Physicians, non-fathers, under 26 years of age on July 1, 1961, now in Class I-A or Class I-A-O, with the oldest listed first;
2. Physicians, fathers, as above;
3. Physicians born in 1935 who will be 26 on July 1, 1961, classified as above, with the youngest listed first; and
4. Physicians born in 1934, classified as above, with the youngest listed first.

The hazard to the involved hospital in justifying "essentiality" has been noted before.

GIVES RUSSEL LECTURE—Jerome W. Conn, M.D., Ann Arbor, delivered the Henry Russel Lecture May 4 at the



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NEWS BRIEFS

University of Michigan. Selection of the Russel Lecturer each year by the U-M Research Club marks the highest honor The University of Michigan can give a senior faculty member. Dr. Conn is the author of more than 150 scientific publications and has won national and international recognition as a clinical investigator in the field of endocrinology and metabolism.

* * *

ADDRESSES ACHA—John M. Dorsey, M.D., Detroit, was the principal speaker at the annual banquet of the American College Health Association at Wayne State University, April 7. About 400 doctors, nurses, psychologists and public health and social workers attended.

* * *

TO INTERN IN STATE—Two-thirds of the June graduating class of The University of Michigan Medical School will take internship training at 23 Michigan hospitals. Of the 178 graduates, 117 have been selected by Michigan hospitals.

* * *

STUDIES IN RUSSIA—Fred M. Davenport, Ann Arbor, has been invited to be one of six American investigators who are to make a study of virological investigation in the Soviet Union under sponsorship of the U. S. Public Health Service and the U. S. Department of State.

* * *

ON "REHAB" COMMITTEE—Only Michigan appointee to the national "Ad Hoc Committee for Study of

Rehabilitation Facilities" is Joseph N. Schaeffer, M.D., of Detroit. Dr. Schaeffer, chairman of the Wayne State University department of physical medicine and rehabilitation, is director of the Rehabilitation Institute of Detroit.

The Ad Hoc committee will meet periodically in Washington to evaluate progress made in the health field and to more clearly define anticipated expenditures and needs.

* * *

HONORED—Chrysler Corporation was awarded the 1961 Health Achievement in Industry award from the Industrial Medical Association. Marion Jocz, M.D., Chrysler medical director, was thus signally honored for his long-time and progressive medical and health policies in industry.

* * *

RESEARCH GRANTS—Nearly 300 agencies across the nation received grants totaling \$592,485 from Smith Kline & French Foundation during 1960. The trustees' report reveals that since its beginning in 1952, the Foundation has given grants of \$4,026,223 to charitable, educational and scientific organizations.

* * *

ANNOUNCE WAYNE COURSES—The Department of Psychiatry of Wayne State University College of Medicine will offer two Postgraduate Intensive Courses in Psychiatry this summer, each one combined with a seven-day recreation week for participating doctors and their families. The first course will be at Blaney Park Resort, Blaney Park, Michigan, July 9 through 16. The second

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course will be at Charlevoix Beach Resort Hotel, Charlevoix, August 6 through 13. Classes will consist of three seminars held daily for the doctors, and one daily seminar for the doctors' wives.

For information, write Dr. Henry Krystal, Director, Postgraduate Education, Department of Psychiatry, W.S.U. College of Medicine. Address: Department of Psychiatry, Detroit Receiving Hospital, Detroit 26, Michigan.

* * *

PLANS ADVANCED—More than 5,000 public health specialists are expected to attend the 89th annual meeting of the American Public Health Association in Detroit, November 13-17. About 60 related organizations will meet at the same time, all at Cobo Hall.

Joseph G. Molner, M.D., Detroit, is chairman of the local arrangements committee of which MSMS Executive Director Wm. J. Burns is a member.

The APHA has more than 13,000 members.

* * *

USPHS RESEARCH FELLOWSHIP—Edward C. Heath, Ph.D., assistant professor of bacteriology in The University of Michigan Medical School, has received a United States Public Health Service Senior Research Fellowship, effective about July 1.

The fellowship provides complete support for the faculty position plus an extra \$7,500 for the individual's research program.

It lasts for a five-year period, and is awarded to scientists chosen from a field of applicants from all over the country. Each institution is permitted a limited number of applicants.

* * *

SOURCES OF FINANCIAL AID TO MEDICAL STUDENTS—Each year the Association of American Medical Colleges and its member schools receive a great many requests for information on financial aid available to medical students. As a part of the Association's intensive action-program dealing with the problem of medical student finances, a brochure entitled *Sources of Financial Aid to Medical Students* has been published. This brochure is designed to help medical students and prospective applicants to medical school get in touch with the individuals in each State in the U.S. who can provide concrete information and help on the problem of financing the cost of a medical education.

Every effort has been made to make the listing of sources of financial aid as current as available information permits. The Association would appreciate it if readers of the brochure would supply names and addresses of any agencies or organizations which should be added to the list.

Copies may be obtained by writing to Dr. Ward Darley, Executive Director, AAMC, 2530 Ridge Ave., Evanston, Illinois.

* * *

REPORTS PROGRESS—The Southeastern Michigan Division of the American Cancer Society reports that 5,000 Detroit-area women viewed the recent educational films in 10 Detroit theatres. The special film program for women also included the distribution of literature by volunteer workers.

(Continued on Page 828)



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(Continued from Page 826)

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MEDICAL MEETINGS, U.S.A.

International College of Surgeons, New England Regional Meeting, July 1-4, 1961, Chatham Bars Inn, Chatham, Cape Cod, Mass.

American Physical Therapy Association, July 2-7, 1961, Palmer House, Chicago. Lucy Blair, 1790 Broadway, New York 19, Executive Director.

Association of Hospital and Institution Libraries, Division of the American Library Association, July 9-15, 1961, Cleveland Public Auditorium, Cleveland. For information, write American Library Association, 50 E. Huron St., Chicago 11.

National Medical Association, Aug. 7-10, 1961, Commodore Hotel, New York. John T. Givens, M.D., 1108 Church St., Norfolk, Va., Executive Secretary.

Rocky Mountain Radiological Society, Aug. 10-12, 1961, Denver Hilton Hotel, Denver. John H. Freed, M.D., 4300 E. 9th Ave., Denver 20, Secretary-Treasurer.

American Veterinary Medical Association, Aug. 20-24, 1961, Sheraton Cadillac Hotel, Detroit. H. E. Kingman, Jr., D.V.M., 600 S. Michigan, Chicago, Executive Secretary.

Biological Photographic Association, Aug. 21-24, 1961, Pick-Congress Hotel, Chicago. Mrs. Jane W. Crouch, Box 1668, Grand Central P.O., New York 17, Executive Secretary.

American College of Physical Medicine and Rehabilitation, Aug. 27-Sept. 1, Sheraton-Cleveland Hotel, Cleveland. Dorothea C. Augustin, 30 N. Michigan Ave., Chicago 2, Executive Secretary.

American Fracture Association, Sept. 17-21, 1961, Shoreham Hotel, Washington, D. C. H. W. Wellmerling, M.D., 610 Griesheim Bldg., Bloomington, Ill., Executive Secretary.

American Society of Plastic and Reconstructive Surgery, Sept. 24-29, 1961, Roosevelt Hotel, New Orleans. T. Ray Broadbent, M.D., 508 E. S. Temple, Salt Lake City, Secretary.

American Hospital Association, Sept. 25-28, 1961, Atlantic City. Mr. Maurice J. Norby, 840 N. Lake Shore Dr., Chicago 11, Secretary.

American Roentgen Ray Society, Sept. 26-29, 1961, Deauville Hotel, Miami Beach, Fla. C. Allen Good, M.D., Mayo Clinic, Rochester, Minn., Secretary.

American Association of Medical Clinics, Sept. 27-29, 1961, Barbizon Plaza Hotel, New York. Joseph B. Davis, M.D., Davis Clinic, 131 N. Washington St., Marion, Ind., Secretary-Treasurer.

American Association for the Surgery of Trauma, Sept. 28-30, 1961, Drake Hotel, Chicago. William T. Fitts, Jr., M.D., 3400 Spruce St., Philadelphia 4, Secretary.

College of American Pathologists, Sept. 30-Oct. 3, 1961, Seattle. For information write: A. H. Dearing, M.D., Prudential Plaza, Suite 2115, Chicago 6.

American Society of Clinical Pathologists, Sept. 30-Oct. 8, 1961, Olympic Hotel, Seattle. Miss Eleanor F. Larson, 445 N. Lake Shore Dr., Chicago, Manager.

IN MEMORIAM

CLIFFORD F. BRUNK, M.D., sixty-nine, of Old Mission, died April 15, 1961.

Until his retirement eight years ago, he had practiced medicine in Detroit for thirty-one years. He was an ear, nose and throat specialist and served on the staff of Jennings Hospital.

A graduate of Goshen College and Ohio State University, he was a member of the American College of Surgeons. He belonged to the University Club, Country Club of Detroit, Bayview Yacht Club, the Players and the American Legion.

SAMUEL W. DONALDSON, M.D., sixty-nine, American College of Radiology gold medal winner and head radiologist at Ann Arbor's St. Joseph Mercy Hospital, died April 6, 1961.



Doctor Donaldson had been with the hospital for thirty-one years and directed installation of all its x-ray equipment. He received the gold medal, the ACR's highest honor, in 1955 for research on the statistics of radiologic practice. He also was author of several books on his specialty, including one on radiologic testimony in court.

He was born in Rockford, Tennessee, received a bachelor's degree from the University of Tennessee and

in 1916 graduated from the University of Michigan medical school.

He was a fellow of the American College of Radiology. Memberships included American Roentgen Ray Society, Radiological Society of North America, Detroit X-Ray and Radium Society. Dr. Donaldson was a past president of Washtenaw County Medical Society, Detroit X-Ray and Radium Society and Michigan Association of Radiologists.

HOMER E. ISLEY, M.D., fifty, of Blissfield, died February 10, 1961.

Born in Wellsville, Michigan, Doctor Isley graduated from Blissfield High School, and from Michigan State University in 1933 with a degree in chemical engineering.

After a refresher course at Adrian College, he entered the Louisville, Ky., School of Medicine, from which he received his degree in 1942. He interned and served as resident physician at Lucas County Hospital, now Maumee Valley Hospital, from 1942 to 1944.

He served as a captain in the Army Air Corps during World War II. Following his discharge in 1946, he established his practice in Blissfield.

He was a past president of the Lenawee County Medical Association.

GEORGE A. KAMPERMAN, M.D., eighty, Detroit physician, died March 30, 1961.

Doctor Kamperman received his medical degree in 1907 from University of Michigan. Until 1912, he was assistant in obstetrics and gynecology at University Hospital.

He was chief of the Department of Obstetrics and Gynecology at Harper Hospital from 1921 to 1944, serving as chief of staff from 1933 to 1944.

Memberships included Detroit Academy of Medicine, American College of Surgeons, Detroit Athletic Club, American Gynecological Society and the American College of Obstetricians and Gynecologists.

A native of Zeeland, he had lived in Detroit since 1913.

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COMMUNICATIONS

K. H. Johnson, M.D.
President
Michigan State Medical Society
Lansing, Michigan

Dear Doctor Johnson:

I want to thank you most sincerely for your kind words about my recent television debates with Mr. Reuther. I am gratified that I was able to represent American medicine against a very skillful debater.

The reactions to my appearance deepened my conviction that everyone must join actively in the monumental effort to preserve the highest quality of medical care without government regulation. Every doctor, every community leader and industrial spokesman must not sit back and let others do the job. Every one of us has the obligation to fight for our principles.

Again, thank you for your message.

Sincerely,
EDWARD R. ANNIS, M.D.

Dear Dr. Haughey:

On page 364 of the JMSMS, March issue, you have made a few references to the Study of Hospital and Medical Economics. I should like to comment briefly on them.

There is no question but that hospital, medical and prepayment groups in Michigan have cooperated with the Study. They have not only given assent to have records examined, but beyond this have spent appreciable time answering questions, using staff to track down information and the like. Furthermore, the quality of the help has been excellent.

The report was not promised for May 1959. The Study did not get underway with intensity until the summer of 1958, some staff members were not recruited until the end of 1958 and by the spring of 1959 intensive field work had only begun. In 1959 it was stated that a few reports would be ready in the spring of 1960. These have been delayed for two reasons, i.e., the volume of work has been greater than anticipated and a policy decision was made, contrary to what was planned initially, to not release one report until all were finished. The close interrelationship of the projects became more obvious to the staff as the work progressed.

The data released to Senator McNamara were cleared as a matter of courtesy with the Commission and immediately made public. Copies of the testimony were included in board minutes of Blue Cross and Blue Shield. The data were essentially descriptive and contained no interpretations or recommendations.

At various junctures during the course of the Study representatives of MSMS, Michigan Hospital Association and other groups have been asked to come to Ann Arbor to observe the progress of the work. There has been no attempt to fashion a punitive tool, rather information regarding objectives, methods and even some preliminary findings has been shared in an effort to create interest in the problems under study and pave the way for whatever changes are indicated.

The Study will be discussed with the Governor's Commission on May 13, May 27 and June 3. On each day, material covered will be released immediately to the public. Previous to each meeting the material will be reviewed by the Policy Committee of the University. Three meetings of the

Commission have been set because of the bulk of the manuscript.

The Study will be published for wide distribution by the American Hospital Association. A publication date has not been set but the editorial staff of the Association is at work now.

Sincerely yours,
W. J. McNERNEY, Director,
Bureau of Hospital Administration
University of Michigan

Ann Arbor, Michigan
April 4, 1961

Journal Michigan State Medical Society
Lansing, Michigan

Dear Sir:

You invited comment on your May, 1961, issue recently sent to me. I have enjoyed every article to the fullest. I agree that compulsory retirement at a chronological age is a fallacy. I am hoping that this categorizing of the elderly will lessen in emphasis, and probably it will, if planning be done on a total community pattern. I, too, view with alarm the increasing tendency toward the welfare state, particularly on a chronological basis.

Need is need, regardless of age. I also view with greater concern the shifting of family responsibilities to social agencies and institutions. There is truth in those so-captioned "Socio-Economic Trends," but let's not lose sight of the spiritual and indestructible value that can preserve the togetherness of family units.

I didn't intend to proceed at such length, but I am totally interested. I have been in the field since 1952, and I should add that I am only a volunteer, past and present.

Sincerely yours,
ELISE J. MARGOLIUS

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Michigan Authors

George Moriarity, M.D., Eiki Makino, M.D., and Raymond Husband, M.D., Detroit, "Gems and Strata-gems 1961 Meeting, American College of Surgeons," *Harper Hospital Bulletin*, January-February, 1961.

Murray B. Levin, M.D., and Hermann Pinkus, M.D., Detroit, "Autosensitivity to Desoxyribonucleic Acid (DNA)," *The New England Journal of Medicine*, March 16, 1961.

F. Deborah Johnson, M.D., and Donald R. Korst, M.D., Ann Arbor, "Pancytopenia Associated with Sulfamethoxypyridazine Administration," *Journal, American Medical Association*, March 18, 1961.

Sidney Friedlaender, M.D., and Alex S. Friedlaender, M.D., Detroit, "Parenteral Steroids in the Management of Acute Allergic States," *American Practitioner and Digest of Treatment*, March, 1961.

Andrew F. Caughey, Jr., M.D., Detroit, "Electronic Detection of Fetal Life," *Obstetrics and Gynecology*, March, 1961.

P. U. Fechner, M.D., Ann Arbor and Eloise, "Influence of Corticotropin (ACTH) on Healing of Corneal Ulcers in Guinea Pigs," *Archives of Ophthalmology*, April, 1961.

H. Saul Sugar, M.D., Detroit, "Surgical Treatment of Tumors of the Orbit," *Eye, Ear, Nose and Throat Digest*, April, 1961.

R. W. Talley, M.D., V. K. Vaitkevicius, M.D., M. J. Brennan, M.D., and J. E. Kelly, M.D., Detroit, "Intra-arterial Chemotherapy of Malignant Diseases," *Henry Ford Hospital Medical Bulletin*, March, 1961.

Joseph P. Abraham, M.D., Shirley A. Johnson, Ph.D., Orhan N. Ulutin, M.D., and M. June Caldwell, B.A., Detroit, "Hemorrhagic Complications of Polycythemia Vera," *Henry Ford Hospital Medical Bulletin*, March, 1961.

Leonard E. Himler, M.D., Ann Arbor, "Emotional Problems in Industry: Recognition and Preventive Measures," *Industrial Medicine and Surgery*, April, 1961.

T. Manford McGee, M.D., Detroit, "Streptomycin Sulfate and Dihydrostreptomycin Toxicity," *Transactions, American Academy of Ophthalmology and Otolaryngology*, March-April, 1961.

Marvin W. Woodruff, M.D., Richard L. Malvin, Ph.D., and Ian M. Thompson, M.D., Ann Arbor, Michigan, "The Renal Transport of Nitrofurantoin," *Journal, American Medical Association*, April 1, 1961.

Thomas H. Rea, Jr., M.D., Ann Arbor, "The Cutaneous Lesions of Sarcoidosis," *The University of Michigan Medical Bulletin*, December, 1960.

John W. Sigler, M.D., Detroit, "Common Rheumatic Disorders," *American Practitioner and Digest of Treatment*, April, 1961.

G. Donald Albers, M.D., Grand Rapids, "Otometric Operations," *Archives of Otolaryngology*, April, 1961.

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Editorial Comment

White House Conference on Aging

(Georgia Medical Journal, March, 1961)

It is high time that physicians throughout our state realized that labor has pledged its vast resources to defeat the voluntary approach, that much is being done to undermine the physician image to achieve this end, and that already a ruthless campaign is in force to vilify and downgrade medicine. There is no doubt in our minds that the establishment of the financing of the health care under the current social security concepts will eventuate in government control of medicine, hospitals, dentistry, nursing services, and nursing homes, in fact, all of the health care fields.

Each physician must fight harder than he has before; he must fight at his local level as well as through his state and national organizations to combat this trend. Such a system represents more than "a foot in the door." It means the abolition of the private practice of medicine.—JOHN S. ATWATER, M.D., Atlanta.

Cautious Approach Needed

Battle Creek Enquirer-News, February 11, 1961

President Kennedy's health program for the aged—if it will work as he envisions it—sounds almost too good to be true. On the surface it seems to answer the need of the hour without a single objectionable feature. But, there are perils in it, nonetheless.

The program would be financed by only a fractional increase in social security taxes. As Mr. Kennedy sees it, the plan would be merely a prepaid insurance project and would create no additional burden on the federal treasury. An even more intriguing aspect is found in Mr. Kennedy's assurance that it is not a program of socialized medicine. The President contends that everyone would have absolute freedom of choice in selecting doctors and hospitals. And, he says there would be no supervision of control over

the practice of medicine by any doctor or over the manner in which medical services are provided by any hospital.

This is unquestionably one of the most Utopian-appearing proposals ever submitted to Congress. But, will it work out in practice?

It must be assumed, of course, that actuarial experts have already figured out the financial aspects and that, as of now, the one-fourth of one per cent increase in social security taxes will cover the cost. In the case of workers earning at least \$5,000 per year, this tax increase would eventually amount to \$18.50 annually, for both employee and employer. This is only a small fraction of the yearly premium on most medical care insurance plans.

The dangers in Mr. Kennedy's proposal do not lie in the financial field. Instead, it is the matter of federal control over doctors and medical care with which concern must be expressed. Regardless of the President's protestation that the plan is not socialized medicine and that no federal supervision of doctors and hospitals would be imposed, the history of American bureaucracy contradicts him.

It has long been the rule in government that when federal funds are dispersed, certain criteria formulated in Washington always must be adhered to by those who receive the money. The current federal highway program is an outstanding example of federal dictation to the states that get road building funds. No matter what local highway requirements may actually be, the Bureau of Public Roads has the final say on how the roads may be constructed and marked.

There is no reason to optimistically presume that the medical care program would be immune to such federal control. The only way to insure against it would be in the wording of the law itself—a matter that Congress should consider carefully. The regimentation of doctors and hospitals cannot be condoned.

Therefore, the Kennedy proposal must be approached with considerable caution, lest it become a monster that could destroy the finest system of medical practice and care the world has ever known.

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FETAL PHYSIOLOGY AND DISTRESS. Edited by Thaddeus L. Montgomery, M.D. **ENDOCRINOLOGY.** Edited by Robert B. Greenblatt, M.D. *Clinical Obstetrics and Gynecology*, Volume 3, Number 4, December, 1960. New York: Paul B. Hoeber, Inc., Medical Division of Harper & Brothers. Series, \$18.00 per year.

The section on Endocrinology presents many new as well as time-tested theories. The chapter on Hormones and Cancer disputes many fears on the use of hormones. The chapter on Thyroid Gland Preparations is very complete, especially in regard to its interplay with progesterone and aldosterone. This symposium is of interest to all who practice obstetrics and gynecology. It is not only an excellent review of the literature but gives the experience and theories of men who are renowned in their field, such as Greenblatt, Kistner and Zondek, to mention a few.

This volume is one of the most complete symposiums on fetal physiology and distress. The subjects include Causes and a Plan for Their Formation, Drugs and Anaesthesia, Resuscitation, Diagnosis and Treatment and the Mechanisms

of Fetal Physiology. The chapters on Irradiation and the effect of Maternal Pre-diabetes are especially well written and give the newer concepts of two very important subjects. This symposium should be read by all who practice obstetrics because of its completeness and conciseness. Summaries, as well as references, are included at the end of each chapter.

J.R.P.

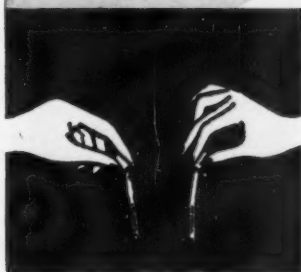
ATLAS OF OBSTETRIC TECHNIC. By J. Robert Willson, M.D., M.S. Professor of Obstetrics and Gynecology, Temple University School of Medicine, Philadelphia, Pa.; Head of the Department of Obstetrics and Gynecology, Temple University Hospital, Philadelphia, Pa. Illustrated by Daisy Stilwell. De Luxe Edition. St. Louis: The C. V. Mosby Company, 1961. Price, \$14.50.

This Atlas serves the practitioner as an excellent reference to consult for operations for delivery. It is modeled after the atlases and texts devoted to descriptions of gynecological operative procedures. The book is primarily pictorial, with just enough reading matter to explain the pictures and diagrams. The material contains the normal as well as the abnormal, with emphasis on normal labor and delivery. The first two chapters also have an outline for the physical set-up of an obstetric department in a hospital, together with a section on Analgesia and Anaesthesia. This text should be on every hospital library shelf for reference by all persons doing obstetrics, as well as those doing surgery. It also would be most useful in the field of teaching.

J.R.P.

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LOSE WEIGHT AND LIVE. By Robert P. Goldman. Drawings by Roland Rodegast. Garden City, New York: Doubleday & Company, Inc., 1961. Price, \$3.95.

Mr. Goldman shares with his readers a very sensible seven-point plan for losing weight without having to eliminate any special foods which are in the every-day pattern. It is a plan to change one's eating habits and does not involve following a special diet, or computing calories. Basically, he decreased the total amount of food consumed, ate smaller portions, eliminated one at a time certain high calorie foods, and very conscientiously became more active physically. All of these efforts together resulted in the proper weight loss which he has been able to maintain for several years. His wife contributes a chapter, giving hints as to how to encourage the weight-loser in his efforts.

W.H.

INSTRUCTIONAL COURSE LECTURES. The American Academy of Orthopaedic Surgeons. Volume XVII, 1960. Editor, Fred C. Reynolds, M.D., St. Louis, Missouri. Illustrated. St. Louis: The C. V. Mosby Company, 1960. Price, \$18.50.

This volume, like its predecessors, is a selected compilation of certain of the instructional courses given at the preceding annual meeting of the American Academy of Orthopaedic Surgeons.

For the benefit of those not familiar with this procedure, these courses represent from one-hour to three-hour presentations on a given subject by the man, or men, considered best qualified throughout the country, or even from foreign

lands. The discussion, therefore, tends to approximate the appreciation level of those familiar with the routine aspects of these problems and interested in a more penetrating grasp of the material.

Of the five parts in this volume, two are symposia. One involves athletic injuries and the other, bone graft surgery. The remaining three cover fractures, children's orthopedics, and a miscellaneous group.

As before, for those who practice more than occasional orthopedics, the series remains a must item.

R.H.A.

MANAGEMENT OF FRACTURES, DISLOCATIONS, AND SPRAINS. (Key and Conwell's). By H. Earle Conwell, M.D., F.A.C.S., Associate Professor of Orthopedic Surgery, University of Alabama School of Medicine, Birmingham, Alabama; Attending Orthopedic Surgeon, University Hospital, St. Vincent's Hospital, Children's Hospital, Baptist Hospitals, East End Hospital, and South Highlands Infirmary, Birmingham, Ala.; Consulting Orthopedic Surgeon, Veterans Hospitals, Tuscaloosa, Ala. and Montgomery, Ala.; Chief, Conwell Orthopedic Clinic, Birmingham, Ala.; and Fred C. Reynolds, M.D., Professor of Orthopedic Surgery, Washington University School of Medicine, St. Louis, Mo. Seventh Edition. 1,227 illustrations. St. Louis: The C. V. Mosby Company, 1961. Price, \$27.00.

Quite a thorough revision has occurred since the previous edition, and all to the good.

This text has always been a standard reference work, although it admittedly does not cover every conceivable injury in encyclopedic fashion. One of its strong points is

JMSMS

that the basic discussion of each entity reflects, obviously, the authors' beliefs, yet there is usually added a brief discussion of other authors' opinions, together with a good bibliography.

The illustrations are well done and plentiful. The volume deserves a place on the shelf of both amateur and expert.

R.H.A.

711 MEDICAL MAXIMS. Volume II. By William S. Reveno, M.D., Associate Professor of Clinical Medicine, Wayne State University College of Medicine; Physician, Harper Hospital and Detroit Receiving Hospital, Detroit, Michigan. Springfield, Illinois: Charles C Thomas, 1961. Price, \$3.50.

Dr. Reveno's collection of maxims, which he has garnered over a number of years, were first published in book form ten years ago. He has contributed them to the *Detroit Medical News*, the *Journal of the Michigan State Medical Society*, and to other publications. These maxims are terse, short statements of medical observations, ideas for diagnosis, for treatment, et cetera. They are extremely well done, and one is tempted to keep on reading them. This volume is again divided into a number of sections with the maxims classified in the various sections. It is a wonderfully appealing list of observations which one can use many times in his day of work. A look into any section will usually give the answer to the question one had in mind.

We are very much pleased and very happy to have this second volume of Dr. Reveno's observations from a very extensive and almost unique facility for study.

BOOKS RECEIVED

THE CHANGING YEARS. The Menopause without Fear. By Madeline Gray. New revised edition. Dolphin Books. Garden City, New York: Doubleday & Company, Inc., 1961. Price, 95c.

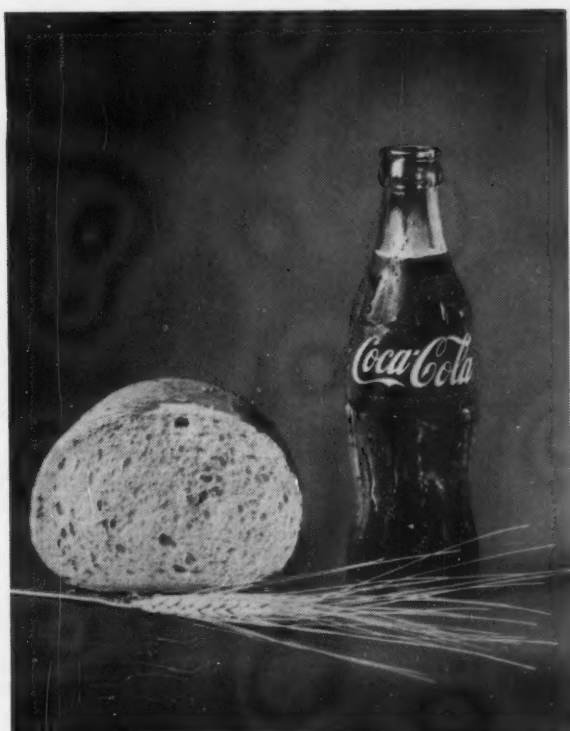
PYELONEPHRITIS. By Fletcher H. Colby, M.D., Consultant, Massachusetts General Hospital, former Chief of the Urological Service and Associate Clinical Professor, Harvard Medical School. Baltimore: The Williams and Wilkins Company, 1959. Price, \$7.50.

INSULIN TREATMENT IN PSYCHIATRY. Proceedings of the International Conference on the Insulin Treatment in Psychiatry held at the New York Academy of Medicine, October 24 to 25, 1958. Edited by Max Rinkel, M.D., Boston, Massachusetts, and Harold E. Himwich, M.D., Galesburg, Illinois. New York: Philosophical Library, 1961. Price, \$5.00.

OBSERVATIONS ON DIRECT ANALYSIS. The Therapeutic Technique of Dr. John N. Rosen. By Morris W. Brody, M.D. Forewords by John N. Rosen, M.D. and O. Spurgeon English, M.D. New York-Washington-Hollywood: Vantage Press, 1961. Price, \$2.95.

MEDIEVAL AND RENAISSANCE MEDICINE. By Benjamin Lee Gordon, M.D., F.I.C.S. New York: Philosophical Library, 1961. Price, \$10.00.

CLINICAL DISORDERS OF HYDRATION AND ACID-BASE EQUILIBRIUM. Second Edition. By Louis G. Welt, M.D., Professor of Medicine, Department of Medicine, University of North Carolina. Boston and Toronto: Little, Brown & Company, 1961. Price, \$7.00.



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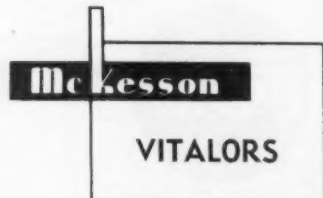
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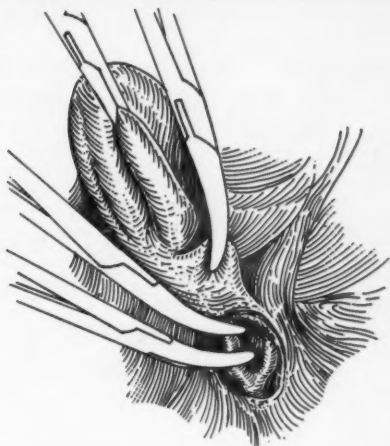
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Source: Farris, J. M., and Smith, G. K.:
M. Clin. North America 43:1133 (July) 1959.

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1. The Composition of Milks, Publication 254, National Academy of Sciences and National Research Council, Revised 1953.
2. Brown, C.W.; Tuholski, J.M.; Sauer, L.W.; Minsk, L.D., and Rosenstern, I.: J. Pediat. 56:391 (Mar.) 1960.



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